UPPER COOK INLET COMMERCIAL FISHERIES

ANNUAL MANAGEMENT REPORT, 1990

By

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1990 UPPER COOK INLET

ANNUAL MANAGEMENT REPORT

Regional Information Report[1] 2S91-1

Submitted by:

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INTRODUCTION

The Upper Cook Inlet management area consists of that portion of Cook Inlet north of the latitude of Anchor Point and is divided into the Central and Northern Districts (Figure 1). The Central District is approximately 75 mi long, averages 32 mi in width, and is further subdivided into six subdistricts. The Northern District is 50 mi long, averages 20 mi in width and is divided into two subdistricts. At present, all five species of Pacific salmon (*Oncorhyncus*), razor clams (*Siliqua patula*), and Pacific herring (*Clupea harengus pallasi*) are subject to commercial harvest in Upper Cook Inlet. Harvest statistics are gathered and reported by five-digit statistical areas and sub-areas (Figure 2).

Salmon

Since the inception of a commercial fishery in 1882, many gear types, including fish traps, gill nets, and seines have been employed with varying degrees of success to harvest salmon in Upper Cook Inlet. Currently, set (fixed) gill nets are the only gear permitted in the Northern District, while both set and drift gill nets are used in the Central District. The use of seine gear is restricted to the Chinitna Bay Subdistrict where they are employed only sporadically. Drift gill nets have accounted for 60% of the average annual salmon harvest since 1966 with set gill nets harvesting virtually all of the remainder (Appendix A.1-6).

Commercial salmon harvest statistics specific to gear type and area are available only back to 1954 (Appendix A.7). Run-timing and migration routes utilized by all species overlap to such a degree that the commercial fishery is largely mixed-stock and mixed-species in nature. Typically, the Upper Cook Inlet harvest represents approximately 5% of the statewide catch.

In terms of their economic value, sockeye salmon (*O. nerka*) are by far the most important component of the catch followed in order by chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*) and chinook salmon (*O. tshawytscha*) (Appendix A.8).

Herring

Commercial herring fishing began in Upper Cook Inlet in 1973 with a modest harvest of bait-quality fish along the east side of the Central District and has expanded in recent years to include small-scale sac roe fisheries in Chinitna and Tuxedni Bays (Appendix A.9). The total herring harvest has averaged less than 400 tons having an exvessel value below $200,000, one of the smallest herring fisheries in the state.

Because the glacial waters of Upper Cook Inlet preclude the use of aerial surveys to estimate biomass of herring stocks, the management approach utilized has necessarily departed from the standard techniques employed in the more traditional herring fisheries. Present management policy allows for modest changes in harvest levels on a yearly basis, monitoring catches for shifts in age composition, and establishing harvest levels that appear to be sustainable. Gill nets are the only legal gear for herring in Upper Cook Inlet with set gill nets

being used almost exclusively. Harvests are generally concentrated in the Clam Gulch area (bait herring) and in the Snug Harbor and Magnetic Island areas of Tuxedni Bay and near Clam Cove and Camp Point in Chinitna Bay (roe herring).

Razor Clams

The commercial harvest of razor clams from Upper Cook Inlet beaches dates back to 1919. Harvest levels have fluctuated from no fishery for as many as eight consecutive years to production in excess of half a million pounds (live weight) in 1922 (Appendix A.10). The sporadic nature of the fishery has been a function of limited market opportunities rather than limited availability of the resource.

Razor clams are present in many areas of Cook Inlet with particularly dense concentrations occurring near Polly Creek on the western shore and from Clam Gulch to Ninilchik on the eastern shore. The eastern shoreline has been set aside for sport harvest only since 1959 and all commercial harvests since that time have come from the west shore, principally from the Polly Creek area. A large portion of the Polly Creek beach is approved for the harvest of clams for the human food market. Bait clams may be taken only outside of this approved area. No size restrictions or overall harvest limits are in place for any area. Virtually all of the commercial harvest has come by hand-digging although regulations prior to 1990 allowed the use of mechanical harvesters (dredges) south of Spring Point or within a one mile section of the Polly Creek beach. Numerous attempts to develop feasible dredging operations have been largely unsuccessful due to excessive shell breakage or the limited availability of clams in the area open to this gear.

1990 COMMERCIAL SALMON FISHERY

The 1990 commercial harvest of just under 5 million salmon in Upper Cook Inlet is the eleventh highest catch recorded for this fishery and approximately 1 million fish above the long-term average. The harvest was valued at approximately $41 million, the fifth highest value on record but the lowest in 4 years. The Upper Cook Inlet harvest accounted for 7.4% of the statewide salmon harvest value.

Throughout the 1990 season, emergency order announcements and fishery updates were provided to radio stations in Homer and the Kenai-Soldotna area. Emergency orders and daily escapement information were also made available through 24-hour recorded message telephone lines. Efforts were also made to broadcast emergency order announcements via marine VHF radio to aid prompt distribution to the drift fleet.

Sockeye Salmon

The 1990 sockeye salmon harvest of 3.6 million was the seventh highest catch on record but the lowest harvest since 1984. Valued at $35.8 million, the sockeye salmon harvest comprised 88% of the value of the total commercial salmon fishery.

The distribution of the catch between drift gear (64%) and set net gear (36%) differed slightly from the long-term average (59% drift).

Management of the Upper Cook Inlet sockeye salmon fishery integrates information received from a variety of programs which together provide an in-season model of the actual return. These programs include offshore test fishing, escapement enumeration by sonar and weir, comparative analysis of historic commercial harvest and effort levels, and age composition studies.

The offshore test fishing program employs a chartered gill net vessel fishing standardized stations along a transect crossing Cook Inlet from Anchor Point to the Red River delta. The program provides an in-season estimation of sockeye salmon run-strength by determining fish passage rates (computed by correlating the vessel's daily catch with subsequent commercial harvests and escapement) and fitting these rates to the appropriate historic run-timing profile (Table 1). In 1990, the program was conducted aboard the F/V *Corrina Kay*.

Hydroacoustic devices to quantify salmon escapement into glacial rivers were first employed in Upper Cook Inlet in the Kenai and Kasilof Rivers in 1968 and expanded to the Susitna River in 1978 and the Crescent River in 1979 (Appendix A.11). Operations followed standard procedures in all systems in 1990 and no unusual problems were observed (Table 2). As in the past five years, the Susitna River escapement was monitored by sonar in the Yentna River tributary only due to technical problems with obtaining satisfactory estimates within the mainstem of the Susitna. The Yentna River escapement goal of 100,000 to 150,000 sockeye salmon was established based on the historical proportion of the total Susitna River escapement utilizing this tributary. Weirs placed on Fish Creek and Packers Creek provided daily escapement counts for those systems.

Upper Cook Inlet commercial catch statistics refined to gear type, area and date are available back to 1966. Availability of these statistics in a computerized database format make them extremely valuable for evaluating in-season fishery performance. The 1990 commercial catch by gear type and area can be found in Table 3 while catches by period and area are contained in Tables 4 through 8. Total harvest by statistical area and average catch per permit are contained in Tables 9 and 10. A summary of emergency orders can be found in Table 11 and a summary of fishing periods by gear type and area in Table 12.

Inseason determination of the age composition of sockeye salmon entering the principle rivers frequently provides information helpful in estimating the stock contributions in various fisheries. During the 1990 fishery approximately 30,000 sockeye salmon were examined from catch and escapement samples.

The 1990 season began with the May 25 opening of the sockeye salmon fishery near Big River in the Kustatan Subdistrict. A management plan adopted by the Board of Fisheries first opened this fishery in 1989. Difficulties in enforcing closed waters areas during 1989 resulted in a new definition of these areas by emergency order for the 1990 season and also reduced fishing time from three weekly periods to two to compensate for the expected increased effectiveness of the fishery. By the regulatory close of this fishery on June 24, 6,684 sockeye salmon were harvested and the chinook salmon quota of 1,000 fish nearly attained, duplicating the results of the 1989 fishery. In the short history of this fishery the

sockeye salmon harvest has been well below that envisioned by the Board, the staff and the participating fishermen.

The sockeye salmon return to the Crescent River on the west side of the Central District is sufficiently segregated from the other July sockeye salmon runs to allow management measures to be taken solely within the Western Subdistrict set gill net fishery. The 1990 return was very poor, requiring closure of one regular fishing period (7/16) to ensure that the minimum escapement goal would be met. The resulting Western Subdistrict catch of 21,727 sockeye salmon was the lowest since 1974 and less than half the long-term average. The Crescent River escapement totaled 52,238 sockeye salmon, slightly above the 50,000 fish minimum goal.

The remaining principle stocks of sockeye salmon (Kenai, Kasilof and Susitna rivers) were expected to provide the bulk of the forecast harvest of 4.3 million fish. Fishermen were informed prior to the season that returns to the Susitna and Kasilof rivers were expected to be comparatively weak and that unless early season catches indicated otherwise, the regular period scheduled for July 13 would likely be closed to drift gillnetting in the offshore areas of the Central District. This date was chosen because it appeared most likely to afford substantial benefit to Susitna-bound fish and assist in lowering the exploitation rate on Kasilof-bound fish.

The harvest of these stocks began with normal season-opening dates (June 25 in the drift and most set net fisheries and July 2 in the Upper Subdistrict or "east side" set net fishery). Early season catches in all fisheries were consistent with expected returns. By July 12 the returns had developed sufficiently to identify initial management measures that needed to be implemented; salmon were entering the Kasilof River at a rate much slower than needed to ultimately achieve the desired range; and drift catches to date provided no indication that Susitna River run strength was dramatically higher than anticipated. Accordingly, drift gillnetting was closed throughout the Central District and set gillnetting was closed in the Upper Subdistrict for the regular period scheduled for July 13. The next scheduled period (July 16) was closed in the Upper Subdistrict set net fishery south of mid Kalifonsky Beach (the "Blanchard Line"). Drift gillnetting was prohibited within five miles of this same stretch of beach to continue efforts to provide substantial protection of Kasilof River sockeye salmon while not further disrupting the harvest of sockeye salmon surpluses bound for other systems, primarily the Kenai River.

The drift sockeye salmon harvest for July 16 (584,000 or 982 fish per landing) was the highest of the season and served to confirm the offshore test fishing projection of a total return at or slightly below the forecast level. Catches on upper Kalifonsky and Salamatof beaches (the beaches adjacent to the Kenai River) were also fairly strong (143,000), signaling the first major movement of fish into the Kenai River.

As the escapement level increased rapidly in the Kenai River, an additional fishing period (July 17) was permitted for the east side set nets north of the Blanchard Line and for drift gear within 3 miles of the Kenai Peninsula shoreline from Colliers Dock just north of the Kenai River south to the Blanchard Line. The Kasilof River escapement had improved substantially (21,000 on July 18 for

a total of 71,000) and the Kenai River escapement was increasing rapidly (92,000 on July 18 for a total of 183,000) prompting additional fishing time for both set and drift gill nets along the east side beach on July 18. The regular period on Friday, July 20 proceeded without restriction. Although initial escapement levels in the Yentna River (the principle monitored tributary of the Susitna River) were satisfactory, the daily rate began declining on July 21 with the total escapement still well below desired levels. To further augment the Susitna River escapement, the Northern District set net fishery was closed for the regular period on Monday, August 23 and the drift fleet was prohibited from fishing in the offshore areas of the northern Central District. No further restrictions of regular fishing periods were imposed on any area for the balance of the sockeye salmon return. Additional fishing time was permitted along the east side of the Central District for both set and drift gill nets to harvest surplus sockeye salmon bound for the Kenai River. Many of the additional periods included that portion of the fishery south of the Blanchard Line although this area was precluded from several periods to maintain adequate escapement in the Kasilof River.

In accordance with the Fish Creek Sockeye Salmon Management Plan, a portion of the Knik Arm shoreline was opened for set gillnetting at 10:00 P.M. July 26 and remained open through July 29. This fishery harvested 23,450 sockeye salmon (24% of the Northern District harvest), 5,700 coho salmon and 5,300 chum salmon.

Overall, the management measures employed during the 1990 sockeye salmon season were very successful in achieving the best possible yield while ensuring adequate escapement levels in monitored systems. The Kenai River escapement of 660,000 was slightly below the maximum desired level of 700,000 while the Kasilof River escapement of 144,000 was slightly below the minimum goal of 150,000. The Yentna River escapement of 140,000 nearly equaled the maximum goal of 150,000, an encouraging result after several years of comparatively poor escapements.

Chum Salmon

Chum salmon returning to Upper Cook Inlet are bound principally for the Susitna River with much smaller returns bound for several streams along the west side of the Central District. The harvest occurs primarily in the drift fishery (87%), the Northern District set net fishery (6%) and the Central District west side set net fishery (6%). The timing of the Susitna River return significantly overlaps the timing of the sockeye salmon returns and as a result, management measures directed at sockeye salmon often influence the chum salmon harvest. The Susitna River chum salmon escapement is not measured and no escapement objectives are defined.

The 1990 harvest of 351,000 chum salmon was slightly more than half the long-term average and accounted for 4% of the exvessel value of the salmon fishery. The chum return had been projected to be poor due to severe flooding that occurred in many chum-producing drainages during the autumn of 1986. The drift fishery restrictions (the July 13 closure and the July 23 southerly restriction) contributed to reducing the exploitation of the return and the resulting escapement was subjectively judged to be average to good.

Chum salmon returns to Central District west side streams were also relatively poor and harvests from these areas were well below average. Escapement in the few streams monitored was generally below average.

Pink Salmon

Returns to the Susitna and Kenai rivers combine to account for the majority of the pink salmon production in Upper Cook Inlet. Both rivers have abundant returns only in even-numbered years. Susitna pink salmon return first, passing through the Central District during the latter half of July while Kenai-bound pink salmon are most abundant in the Central District in early August. The harvest occurs principally in the drift fishery (38%), the Central District east side set net fishery (36%) and the Northern District set net fishery (22%).

As with the Susitna chum salmon return, the Susitna pink salmon return overlaps the sockeye salmon return to such a large degree that harvest levels are often influenced by management measures directed at sockeye salmon. Specific fishery alterations directed at Susitna River pink salmon are uncommon. Kenai River pink salmon are harvested most heavily in the Central District east side set fishery in early August. Fishing time in this area after August 5 is typically controlled by the relative strength of the pink salmon return. Estimating the escapement of pink salmon has not proven practical in either system and specific escapement objectives do not exist.

The 1990 pink salmon return produced a harvest of 604,000 fish, well below average for an even-numbered year, and accounted for only 1% of the value of the salmon fishery. The Susitna River return was impacted by the 1986 flooding and the 1990 return, although poor, was considerably improved over 1988. Lack of directed effort to harvest Susitna-bound pink salmon obviated any need for fishery restrictions. The escapement was subjectively judged to be fair to poor.

The Kenai River pink salmon return was above average in strength and one additional fishing period was permitted in the east side set net fishery and in the drift fishery along the east side beach on August 15. The escapement level appeared to be very good.

Coho Salmon

For discussion purposes, it is useful to divide Upper Cook Inlet's diverse coho salmon stocks impacted by the commercial fishery into three broad categories. The first category contains those stocks bound for the Susitna River and other Northern District streams. These migrate through the Central District during the last three weeks of July. The Cook Inlet Salmon Management Plan identifies Susitna River coho salmon as a stock which should experience a minimized commercial interception, to the extent consistent with other goals established within the Plan. While simple in concept, this directive is much more difficult to implement in practice. The management plan identifies a higher priority for the sustained commercial harvest of sockeye, chum and pink salmon stocks, many of which are bound for the same streams at similar times and along similar pathways utilized by Susitna River coho salmon stocks. Consequently, these

stocks are normally exploited at fairly significant levels in the commercial drift and the Northern District set net fisheries. It is occasionally possible to time fishery closures aimed principally at stock conservation of sockeye salmon to take advantage of peaks in abundance of coho salmon but such opportunities arise too infrequently to consistently meet the Plan objectives.

The second category of interest is the early return of coho salmon to the Kenai River which peaks in abundance in early August and is intercepted in both the drift and east side set net fisheries. The allocation status is the same as for Susitna coho salmon. Due to the overlap with the Kenai River sockeye salmon return, it is difficult to avoid a substantial interception of this stock in the commercial fishery.

The third stock grouping consists of a diverse collection of coho salmon returns to the numerous streams along the west side of Cook Inlet. Under the management plan, these stocks are managed primarily for commercial uses. Fishing time in the west side set net fisheries during August is based primarily on the strength of these returns.

The 1990 coho salmon harvest of 500,000 was somewhat above average and accounted for 5% of the exvessel value of the salmon fishery. Commercial interception of Susitna River coho salmon was measurably reduced by the July 23 restriction of the drift fishery and the simultaneous closure of the Northern District set net fishery. Inriver abundance was not directly measured but appeared to be good to excellent.

The Kenai River early return exhibited good run strength as judged by daily catches in the east side set net fishery. Commercial interception of this stock was reduced because of a late return. Additional fishing periods opened to harvest surplus sockeye salmon had ceased by August 1, while coho catches did not peak until nearly mid August. Although the single additional period opened on August 15 to harvest surplus pink salmon increased the coho catch by nearly 6,000, the east side set net coho salmon harvest of 40,000 was the lowest since 1985.

The west side coho salmon returns were above average and fishing in this area was opened for an additional day each week beginning in early August and in the Northern District beginning in mid August. The harvest in these areas was generally above average.

Chinook Salmon

The principle stocks of chinook salmon harvested in the commercial fishery are the return to the Susitna River and the late run to the Kenai River. Created by the Board four years ago and conducted under the direction of the Susitna River Chinook Salmon Management Plan, a minor fishery occurs each June for set gill nets in the Northern District. Each participant is allowed one 35-fathom net and a minimum distance of 1200 feet must be maintained between nets (twice the normal distance). Fishing is permitted for 6 hours each Monday in June until the quota of 12,500 chinook has been harvested or the regular season opens on June 25. Harvest levels have approached or reached the quota in most years but early

closures have generally not been required.

The 1990 Northern District chinook salmon fishery harvested 8,072 chinook salmon, the lowest catch since the inception of the fishery. The reasons for the smaller catch are varied - a somewhat smaller return of salmon, frequent poor weather during fishing periods, and poor tides for fishing during the brief 6-hour periods. One-hundred-thirty-one permit holders made landings during the fishery.

The other major stock of chinook salmon harvested in the commercial fishery, the late run to the Kenai River, generates the greatest controversy in Upper Cook Inlet, pitting Kenai River recreational anglers against Upper Subdistrict ("east side") set netters. An average of over 13,000 chinook salmon were taken annually during the 1980's in the commercial set net fishery, frequently exceeding the sport fish harvest. Much smaller numbers are taken in the drift gill net fishery.

The 1990 east side set net fish ticket total of 4,319 chinook salmon represents the smallest catch since 1976 (an additional 86 chinook salmon were reported as retained for personal use). The probable reasons for this reduced harvest are numerous and difficult to evaluate individually. The 1990 return was one of the smallest since escapement enumeration of chinook salmon was first attempted. Many east side set netters voluntarily released live king salmon found in their nets. Salmon of all species appeared to exhibit a more westerly, offshore migratory pattern in 1990, likely resulting in fewer chinook salmon available to the set net fishery. The relatively modest sockeye salmon return resulted in less fishing time than has been common in many years during the 1980's. Although no evidence, other than the precipitous drop in catch, exists within the Departments of Fish & Game or Public Safety to support such claims, many members of the recreational community believe set netters are avoiding the reporting system.

The chinook salmon controversy reached it's zenith following restriction of the in-river fishery on July 28, allowing only catch-and-release angling for chinook for the final four days of the fishery. This action was taken to insure that the optimum escapement goal, as defined in the Kenai River Chinook Salmon Management Plan, of 22,300 would be attained. Concurrently additional fishing time was permitted in all or part of the east side set net fishery on July 27 (10 hrs), July 29 (18 hrs), July 30 (12 hrs) and July 31 (22 hrs) to harvest surplus Kenai River sockeye salmon. The east side set net harvest during this five day interval (which included two regularly scheduled periods) was 326,151 sockeye salmon and 758 chinook salmon.

Post-Season Perspective

In general, the management strategy employed during the 1990 fishery proved to be very successful. The attainment of the desired sockeye salmon escapement level in the Susitna River was particularly satisfying and underscored the need to continue a conservative approach to the drift gill net harvest just prior to mid-July. Given the outlook for more modest sized returns in the near future, the approach utilized during the 1990 season will likely be similarly employed during coming seasons.

Price, Average Weight and Participation

Prices paid to fishermen for their catch declined somewhat from 1989 prices except for chum salmon which experienced a slight increase. The price per pound for sockeye salmon fell to $1.55, down 15 cents from the previous year (Appendix A.12). Chinook, coho, pink and chum salmon were sold for $1.20, $0.75, $0.25 and $0.60 per pound, respectively. It should be noted that these averages are generated from inseason grounds prices and do not reflect any post-season adjustments.

As determined from fish ticket calculations, the average weight by species did not differ markedly from prior years. Chinook salmon averaged 22.6 pounds per fish while sockeye, coho, pink and chum salmon averaged 6.41, 6.45, 3.40 and 7.10 pounds, respectively (Appendix A.13).

The Commercial Fisheries Entry Commission issued 585 drift gill net permits (69.7% to Alaska residents) and 745 set gill net permits (87% to Alaska residents) for the Cook Inlet area in 1990 (Appendix A.14). A total of 25 firms purchased Upper Cook Inlet fishery products during 1990 (Table 13).

Stock Status and Outlook

In general, Upper Cook Inlet's salmon stocks are in excellent condition with several species (sockeye, chum and coho) setting record harvests during the 1980's. While it is difficult to evaluate all of the possible reasons for the generally high production experienced during the last decade, favorable environmental variables undoubtedly played a large part and, unfortunately, are unlikely to be sustained for long.

Recent sockeye salmon production has been particularly vigorous with the eight highest years of production all having occurred in the last nine years. Production peaked in 1987 with a catch of 9.5 million and appears to be trending slowly downward. Despite escapement levels in excess of 1 million in three of the last four years, smolt and fry surveys indicate that Kenai River returns will remain well below recent levels for at least the next four years. Kasilof River returns, very strong through the early and mid 1980's, declined substantially the last few years and should exhibit a generally improving trend over the next several years. Susitna River escapements in several of the recent parent years were significantly below desired levels and returns to this system for the next few years will likely be diminished. Despite very high parent-year escapements, recent production from Crescent River has been poor. The near-term outlook for this system is difficult to project although all recent escapements were in excess of the minimum goal. In summary, Upper Cook Inlet sockeye salmon harvests through the 1990's will likely average less than three million, a significant decline from the 1980's but substantially above the long-term average. For 1991, the expected total return of sockeye salmon is forecast to be 4.7 million and the harvest should equal 3.2 million (Appendix A.15).

Chum salmon production has been highly variable in recent years, in part due to

the 1986 flooding of the Susitna Basin. Lacking quantitative escapement information, it is more difficult to speculate on near-term returns but it is likely that chum salmon returns will be fair to good over the next four years. The 1991 harvest projection for chum salmon is 500,000.

Susitna River pink salmon have recovered substantially from the 1986 flood and this recovery is expected to continue in 1992 and 1994. Kenai River pink salmon were relatively undamaged in 1986 and this stock is currently healthy and increasing in strength. A harvest of 90,000 is projected for 1991.

Upper Cook Inlet's coho salmon stocks generally produced very strong returns throughout most of the 1980's and no downturn in this trend has been observed. Susitna River escapements have been excellent for the last several years and the outlook for this return is very good. Early-run Kenai River coho salmon returns have ranged from average to good in recent years but harvests have been very high in both the commercial fishery and in the rapidly growing sport fishery. The condition of this stock will need to be carefully monitored in the coming years. The total Upper Cook Inlet commercial harvest for 1991 is projected to be 400,000.

All chinook salmon stocks in Upper Cook Inlet appear to be in reasonably good condition with the exception of several river systems immediately south and west of the Susitna River. These systems apparently sustained substantial damage during the 1986 flooding and returns will likely be below average for the next couple of years. The 1991 projected Upper Cook Inlet commercial chinook salmon harvest is 20,000.

1990 COMMERCIAL HERRING FISHERY

The recent poor abundance of herring in Upper Cook Inlet waters continued in 1990 with a the total harvest of just 127.4 tons being the second lowest in 12 years. The fish also appeared to have a somewhat later run-timing than usual, helping to lower the catch at the time of conservation closures.

Tuxedni Bay

Fishing began in Tuxedni Bay in late April with initial catches very light and generally consisting mostly of immature fish. The peak of the harvest occurred on May 12 and 13 although abundance never approached "good" levels when compared with some of the better years in the bay. The area was closed July 17 after a harvest of just 16.1 tons. Thirty-one permit holders participated in this fishery. Roe percentages of fish sold averaged about 11% although an unquantified number of green fish were dumped. Age composition of harvested fish closely resembled prior years with Age 6 and Age 7 fish predominating (Table 14).

Chinitna Bay

The 1990 fishing season in Chinitna Bay was very brief with the first mature fish showing up in fairly good numbers on May 6 and the guideline harvest level of 50 tons was rapidly filled. The area was closed by emergency order May 9 following a total harvest of 55.9 tons. Thirty-eight permit holders were active in the fishery which harvested predominately Age 6 and Age 7 fish (Table 15). Roe percentages averaged close to 12% with very little dumping of immature fish.

Eastside

The first landing of herring from the eastside bait fishery occurred on May 1, two weeks after the opening of the season. Most of the catch came from south of the Kasilof River with effort concentrated in the Clam Gulch area. Abundance int this area was somewhat reduced from previous years while being much reduced on Kalifonsky and Salamatof Beaches. Overall abundance peaked just prior to mid-May and the fishery closed by emergency order on May 30 following a sharp falloff in catches and effort and increasing reports of salmon being caught in nets. Forty-eight permit holders were active in this fishery, harvesting predominately Age 6 and Age 7 fish (Table 16).

COMMERCIAL RAZOR CLAM FISHERY

The commercial razor clam fishery in Upper Cook Inlet has no closed season and no overall harvest limits. The 1990 fishery got started in early May and continued through late August. Harvest rates throughout the summer remained fairly constant. The season's harvest of 323,533 pounds was taken in nearly equal portions from the Polly Creek area and from Crescent River bar. A total of 42 diggers made just over 2,000 landings by season's end. Diggers were paid $.52 per pound for their harvest making the total fishery exvessel value $168,237. Tide tables covering the 1990 fishery can be found in Table 17.

The Alaska Board of Fisheries deleted mechanical harvesters as legal gear for Cook Inlet razor clams in March of 1990 and as a result no testing of or harvesting by this gear type occurred during the season.

All clams harvested in the fishery were directed into the human consumption market except for the small percentage of broken clams sold for bait.

SUBSISTENCE AND PERSONAL USE FISHERIES

The legal evolution of subsistence hunting and fishing laws for Alaska continued throughout 1990 with several significant rulings coming from various courts. Cook Inlet remained relatively unaffected with essentially the same fisheries operating as in 1989.

The Kenaitze Tribal Fishery

The fishery granted to the Kenaitze tribe under a consent preliminary injunction issued in 1989 from the U.S. District Court was continued for 1990 by a second injunction. Under the terms of the injunction, the Kenaitze Tribe was issued a single permit allowing the bearer, who must be a tribal member domiciled in Game Management Units 7 or 15 (the Kenai Peninsula), to operate a single 10-fathom set gill having a mesh size no greater than 8.5 inches in the Kenai River downstream from a point one-quarter mile above the Warren Ames Bridge and including those marine waters adjacent to the river mouth normally closed to commercial salmon fishing. Fishing was permitted each day on a 24-hour basis from May 15 to September 1 and from September 16 to September 30. Fishing was to terminate if 600 chinook salmon were taken prior to July 31 or if a total of 6,000 salmon were harvested. If 600 chinook salmon were taken prior to July 31, the fishery was to be reopened on August 1.

Fishing occurred primarily in marine waters south of the mouth of the Kenai River and occasionally in an area known as the "Birches", a prominent stand of birch trees on the south bank of the river immediately upstream of the Warren Ames Bridge. The harvest, as reported by the tribal office, totaled 3,477 sockeye, 1,117 coho, 326 pink and 53 chinook salmon.

Tyonek Subsistence Salmon Fishery

Created by court order in 1980, this fishery was originally open only to those individuals domiciled in the village of Tyonek but recent court decisions allow any Alaska resident to participate although very few non-villagers seek permits. Only one permit is allowed per household and each permit holder is allowed a single ten-fathom net having a mesh size no greater than six inches. Fishing periods are open from 4:00 a.m. to 8:00 p.m. each Tuesday, Thursday and Friday from May 15 to June 15 and from 6:00 a.m. to 6:00 p.m. each Saturday after June 15. The 1990 season resulted in a total reported harvest of 797 chinook, 92 sockeye, 366 coho, 124 pink and 10 chum salmon between May 15 and October 15 (Stanek, ADF&G, memorandum). The chinook harvest continues a trend of steadily declining catches in this fishery that began in 1983 when the harvest peaked at 2,755. Forty-nine permits were issued for the early season (Appendix A.16).

Kasilof Personal Use Gill Net Fishery

The Kasilof River personal use gill net fishery was established by the Alaska Board of Fisheries in 1982. Under regulations adopted for this fishery, open fishing periods are set at 6:00 a.m. to 6:00 p.m. daily beginning June 21. Fishing is limited to the beaches adjacent to the mouth of the Kasilof River inside the ADF&G commercial salmon fishing regulatory markers. Participants are permitted a single 10-fathom gill net having a mesh size no greater than six inches and a depth no greater than forty-five meshes. Participants are required to have a current resident Alaska sport fishing license. The fishery is limited to a harvest of 5,000-10,000 sockeye salmon.

In 1990, as in prior years, daily net counts were made at each beach and on-site interviews with fishermen were conducted to determine an average catch per net for both sockeye and chinook salmon. Daily harvest estimates were based on the average catch per net multiplied by the total number of nets fishing.

The fishery was open for nine days before achieving the sockeye salmon quota and was closed by emergency order at 6:00 p.m., June 29. The final harvest was estimated to be 7,123 sockeye and 133 chinook salmon (Table 18). Effort peaked on the third day of the fishery when 147 nets were counted and showed a generally decreasing trend as the fishery progressed. The highest daily harvest occurred on June 29, the final day of the fishery, when 1,173 sockeye salmon were taken and, in general, fishing improved throughout the course of the fishery. Chinook salmon catches were highest during the first few days of the season and had declined to very low levels by the time the fishery closed.

Fall Personal Use Coho Salmon Fishery

The Central and Northern Districts Personal Use Coho Salmon Management Plan was adopted by the Alaska Board of Fisheries in 1983. Open fishing periods are scheduled from 12:00 noon, Saturday until 12:00 noon, Sunday on the last three weekends of September or until 2,500 salmon have been taken; open areas are defined as all areas along the Kenai Peninsula shoreline normally open to commercial set gillnetting from the Kasilof River north to Point Possession. Each permit holder is allotted one 10-fathom set gill net have a mesh size no greater than six inches and not exceeding 45 meshes in depth. A minimum distance of 100 feet is required between nets. A current Alaska resident sportfishing license and a permit issued by the Soldotna ADF&G office is required prior to participation in the fishery. Permit holders are required to report their catch to the Soldotna office within five days of a fishing period in which they participate.

A total of 420 permits were issued for the 1990 fishery. Aerial surveys were conducted each weekend to determine the total number of nets fishing and catch reports received in the Soldotna office from fishermen were used to calculate an average catch per net. Harvest estimates for each fishing period were generated by multiplying the average catch per net by the total number of nets fishing (Table 19).

The first weekend (September 9-10) generated an estimated harvest of 1,014 coho salmon from 224 nets for an average per net of 4.5 fish. The second weekend saw a significant decrease in effort (147 nets) but a near doubling in catch per net (8.7) for an estimated harvest of 1,276. With the cumulative harvest of 2,290 quite close to the regulatory quota of 2,500, the last scheduled weekend of the fishery was closed by emergency order.

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Table 1. Offshore sockeye salmon test fishing observations, F/V Corrina Kay, 1990.[1]

DATE	NUMBER OF STATIONS	FISHING TIME (min)	CATCH	CUMULATIVE CATCH	INDEX	CUMULATIVE INDEX	MEAN LENGTH (mm)	MEAN WEIGHT (kgs)	WATER TEMP (c)	AIR TEMP (c)	SALINITY (ppm)	BEGINNING WIND VEL	BEGINNING WIND DIR	ENDING WIND VEL	ENDING WIND DIR
7/01	6	236.5	21	21	16.910	16.910	542.	.00	10.1	11.5	25.3	12	S	8	SW
7/02	5	197.0	6	27	4.438	21.348	542.	.00	10.2	13.9	24.4	22	SW	13	SW
7/03	6	225.0	21	48	15.763	37.111	552.	.00	11.5	14.5	26.5	10	N	3	NW
7/04	5	181.5	7	55	5.625	42.736	576.	.00	10.9	11.8	22.7	12	S	8	SW
7/05	6	228.5	55	110	41.668	84.404	565.	.00	11.9	12.1	23.0	15	SW	17	SW
7/06	5	177.0	9	119	7.300	91.704	510.	.00	11.6	13.0	21.9	12	SW	4	SW
7/07	6	226.0	16	135	12.285	103.989	567.	.00	12.5	12.6	21.0	0		16	NW
7/08	5	193.0	25	160	18.479	122.468	543.	.00	11.1	11.9	21.8	0		10	SE
7/09	4	149.0	11	171	9.090	131.558	543.	.00	10.8	10.8	22.8	12	NW	-1	
7/10	5	189.0	26	197	19.329	150.887	559.	.00	11.1	12.2	21.5	10	NW	13	SW
7/11	6	239.5	130	327	77.125	228.012	0.	.00	11.0	12.3	21.8	0		6	SW
7/12	4	173.1	155	482	94.918	322.930	558.	.00	10.5	12.5	22.3	6	SW	0	
7/13	5	207.5	79	561	49.801	372.731	567.	.00	11.3	14.4	21.4	2	NE	0	
7/14	3	117.0	21	582	15.684	388.415	561.	.00	10.3	10.7	22.3	22	NW	22	NW
7/15	5	179.5	5	587	4.055	392.470	556.	.00	11.8	12.5	21.0	0		10	SE
7/16	4	145.5	62	649	38.336	430.806	550.	.00	11.3	12.3	20.8	12	SE	13	SE
7/17	5	193.5	220	869	132.757	563.563	578.	.00	12.0	13.4	19.7	15	SE	12	SE
7/18	4	166.0	77	946	47.977	611.540	0.	.00	11.9	13.3	19.9	12	SE	0	
7/19	5	210.0	239	1185	125.931	737.471	574.	.00	11.8	13.0	20.4	0		13	SE
7/20	3	120.0	65	1250	41.080	778.551	587.	.00	11.7	12.0	20.0	20	SW	0	
7/21	5	228.5	280	1530	165.995	944.546	593.	.00	11.9	14.0	20.2	0		0	
7/22	4	157.0	37	1567	28.032	972.578	587.	.00	11.6	12.3	19.8	8	SW	0	
7/23	4	172.0	48	1615	31.565	1004.143	577.	.00	11.6	11.8	20.1	7	SW	11	SW
7/24	5	192.0	67	1682	49.203	1053.346	587.	.00	11.9	10.8	19.8	14	NE	0	
7/25	5	192.5	83	1765	57.466	1110.812	578.	.00	11.9	13.8	19.0	0		0	
7/26	4	164.0	81	1846	54.842	1165.654	578.	.00	12.0	10.0	20.1	10	N	14	NW
7/27	3	114.5	29	1875	61.807	1227.461	-1.	.00	11.3	10.7	19.2	16	NW	-1	
7/28	3	131.5	106	1981	58.939	1286.400	568.	.00	10.7	11.3	19.8	24	NW	20	NE
7/29	5	109.5	30	2011	48.312	1334.712	576.	.00	10.8	10.6	17.8	12	NE	4	NE
7/30	4	147.5	31	2042	22.930	1357.642	579.	.00	11.5	11.8	18.4	0		0	

[1] From Tarbox (1991)

Table 2. Upper Cook Inlet sockeye salmon escapement by river and date, 1990.

Date	KENAI RIVER daily	KENAI RIVER cumulative	KASILOF RIVER daily	KASILOF RIVER cumulative	CRESCENT RIVER daily	CRESCENT RIVER cumulative	YENTNA RIVER daily	YENTNA RIVER cumulative
6-15 Fri			310	310				
6-16 Sat			255	565				
6-17 Sun			247	812				
6-18 Mon			278	1,090				
6-19 Tue			208	1,298				
6-20 Wed			176	1,474				
6-21 Thu			216	1,690				
6-22 Fri			324	2,014				
6-23 Sat			201	2,215				
6-24 Sun			290	2,505				
6-25 Mon			257	2,762				
6-26 Tue			351	3,113	172	172		
6-27 Wed			518	3,631	185	357		
6-28 Thu			657	4,288	339	696		
6-29 Fri			1,079	5,367	408	1,104		
6-30 Sat			1,979	7,346	205	1,309		
7-01 Sun	420	420	2,019	9,365	477	1,786		
7-02 Mon	567	987	1,616	10,981	1,077	2,863		
7-03 Tue	896	1,883	2,181	13,162	518	3,381		
7-04 Wed	4,455	6,338	4,099	17,261	666	4,047		
7-05 Thu	5,865	12,203	5,505	22,766	1,049	5,096		
7-06 Fri	7,116	19,319	5,093	27,859	1,574	6,670		
7-07 Sat	4,495	23,814	2,327	30,186	692	7,362	300	300
7-08 Sun	4,877	28,691	3,622	33,808	757	8,119	363	663
7-09 Mon	3,370	32,061	2,762	36,570	1,515	9,634	414	1,077
7-10 Tue	1,224	33,285	557	37,127	1,159	10,793	371	1,448
7-11 Wed	960	34,245	1,429	38,556	3,009	13,802	333	1,781
7-12 Thu	1,347	35,592	1,942	40,498	1,115	14,917	244	2,025
7-13 Fri	1,852	37,444	1,833	42,331	710	15,627	196	2,221
7-14 Sat	2,381	39,825	1,391	43,722	1,126	16,753	224	2,445
7-15 Sun	2,119	41,944	1,904	45,626	1,284	18,037	184	2,629
7-16 Mon	3,091	45,035	4,755	50,381	2,495	20,532	221	2,850
7-17 Tue	45,984	91,019	21,340	71,721	4,117	24,649	220	3,070
7-18 Wed	92,672	183,691	15,065	86,786	3,584	28,233	484	3,554
7-19 Thu	42,968	226,659	3,038	89,824	1,743	29,976	11,136	14,690
7-20 Fri	36,999	263,658	5,851	95,675	1,901	31,877	15,811	30,501
7-21 Sat	37,841	301,499	1,782	97,457	2,248	34,125	9,342	39,843
7-22 Sun	10,265	311,764	1,598	99,055	2,686	36,811	6,035	45,878
7-23 Mon	29,547	341,311	2,707	101,762	1,971	38,782	7,794	53,672
7-24 Tue	38,417	379,728	2,480	104,242	1,049	39,831	9,762	63,434
7-25 Wed	65,703	445,431	4,417	108,659	2,016	41,847	7,422	70,856
7-26 Thu	28,975	474,406	3,145	111,804	1,979	43,826	9,547	80,403
7-27 Fri	6,211	480,617	2,026	113,830	1,306	45,132	13,113	93,516
7-28 Sat	9,752	490,369	2,605	116,435	852	45,984	9,500	103,016
7-29 Sun	34,442	524,811	4,094	120,529	815	46,799	4,871	107,887
7-30 Mon	33,183	557,994	2,896	123,425	1,941	48,740	3,807	111,694
7-31 Tue	13,781	571,775	2,220	125,645	1,190	49,930	4,039	115,733
8-01 Wed	7,832	579,607	1,899	127,544	909	50,839	4,846	120,579
8-02 Thu	11,556	591,163	2,382	129,926	649	51,488	6,658	127,237
8-03 Fri	23,330	614,493	2,040	131,966	368	51,856	5,569	132,806
8-04 Sat	20,581	635,074	1,252	133,218	382	52,238	2,194	135,000
8-05 Sun	9,850	644,924	1,236	134,454			1,227	136,227
8-06 Mon	8,896	653,820	1,129	135,583			1,039	137,266
8-07 Tue	5,700	659,520	708	136,291			942	138,208
8-08 Wed			1,101	137,392			660	138,868
8-09 Thu			1,432	138,824			541	139,409
8-10 Fri			1,269	140,093			229	139,638
8-11 Sat			756	140,849			378	140,016
8-12 Sun			936	141,785			274	140,290
8-13 Mon			829	142,614				
8-14 Tue			738	143,352				
8-15 Wed			784	144,136				

Table 3. Commercial salmon catch by area and gear type, Upper Cook Inlet, 1990.

Area/Gear	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT	621	2,305,742	246,845	323,955	289,521	3,166,684
CENTRAL SET						
Upper	4,139	1,116,975	40,351	225,429	4,611	1,391,505
Kalgin Island	101	50,532	32,775	8,609	1,916	93,933
Kustatan	945	11,171	11,814	678	386	25,131
Western	574	21,727	23,209	870	8,622	55,002
Chinitna Bay	6	1,519	5,631	145	10,431	17,732
Subtotal	5,902	1,201,924	113,780	235,731	25,966	1,583,303
NORTHERN SET						
Eastern	2,488	27,012	32,101	8,453	3,877	73,931
General	7,094	69,386	107,300	35,491	31,833	251,104
Subtotal	9,582	96,398	139,401	43,944	35,710	325,035
SEINE	0	0	0	0	0	0
GRAND TOTAL	16,105	3,604,064	500,026	603,630	351,197	5,075,022

Table 4. Sockeye salmon catch by area and date, Upper Cook Inlet, 1990.

Date	DRIFT excluding CHINITNA		EAST SIDE SET NET								WESTERN		KUSTATAN		KALGIN		CHINITNA		NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL										WEST SIDE		EAST SIDE	
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-25													65	65								
5-28													136	201								
6-01													457	658								
6-04													451	1,109					405	405	204	204
6-08													577	1,686						405		204
6-11													2,598	4,284					332	737	359	563
6-15													1,211	5,495						737		563
6-18											473	473	834	6,329					530	1,267	267	830
6-22											424	897	355	6,684						1,267		830
6-25	5,922	5,922									451	1,348	134	6,818	1,250	1,250	187	187	215	1,482	224	1,054
6-29	15,658	21,580									1,054	2,402	108	6,926	2,084	3,334	484	671	194	1,676	405	1,459
7-02	27,291	48,871	3,993	3,993	2,950	2,950	3,352	3,352	10,295	10,295	1,209	3,611	168	7,094	930	4,264	48	719	336	2,012	748	2,207
7-06	81,095	129,966	7,237	11,230	6,377	9,327	5,075	8,427	18,689	28,984	1,539	5,150	108	7,202	1,012	5,276	63	782	1,998	4,010	3,801	6,008
7-09	167,358	297,324	2,016	13,246	1,729	11,056	3,334	11,761	7,079	36,063	1,130	6,280	52	7,254	284	5,560	85	867	485	4,495	572	6,580
7-13		297,324		13,246		11,056		11,761		36,063	1,201	7,481	99	7,353	1,242	6,802	111	978	238	4,733	915	7,495
7-16	584,335	881,659	72,993	86,239	70,260	81,316		11,761	143,253	179,316		7,481	422	7,775	2,260	9,062	91	1,069	586	5,319	456	7,951
7-18	34,375	916,034	49,594	135,833	18,797	100,113	6,771	18,532	75,162	254,478		7,481		7,775		9,062		1,069		5,319		7,951
7-20	561,967	1,478,001	79,216	215,049	39,111	139,224	20,395	38,927	138,722	393,200	4,910	12,391	801	8,576	9,470	18,532	69	1,138	14,233	19,552	8,688	16,639
7-21	64,740	1,542,741	62,855	277,904	21,772	160,996	16,788	55,715	101,415	494,615		12,391		8,576		18,532		1,138		19,552		16,639
7-22	9,815	1,552,556	14,757	292,661	5,360	166,356	1,339	57,054	21,456	516,071		12,391		8,576		18,532		1,138		19,552		16,639
7-23	196,554	1,749,110	61,619	354,280	65,857	232,213	30,068	87,122	157,544	673,615	2,601	14,992	657	9,233	8,430	26,962	95	1,233		19,552		16,639
7-25	27,027	1,776,137	21,762	376,042	14,178	246,391		87,122	35,940	709,555		14,992		9,233		26,962		1,233		19,552		16,639
7-26	29,114	1,805,251	15,543	391,585	26,608	272,999		87,122	42,151	751,706		14,992		9,233		26,962		1,233		19,552		16,639
7-27	235,659	2,040,910	23,927	415,512	53,600	326,599	52,577	139,699	130,104	881,810	1,024	16,016	380	9,613	4,376	31,338	67	1,300	18,048	37,600	1,828	18,467
7-28		2,040,910		415,512		326,599		139,699		881,810		16,016		9,613		31,338		1,300	5,229	42,829		18,467
7-29	54,850	2,095,760	34,472	449,984	31,566	358,165		139,699	66,038	947,848		16,016		9,613		31,338		1,300	6,398	49,227		18,467
7-30	138,363	2,234,123	13,753	463,737	45,983	404,148	36,515	176,214	96,251	1,044,099	1,765	17,781	420	10,033	3,254	34,592	44	1,344	10,151	59,378	1,826	20,293
7-31	27,721	2,261,844	9,195	472,932	9,391	413,539	15,172	191,386	33,758	1,077,857		17,781		10,033		34,592		1,344		59,378		20,293
8-01		2,261,844		472,932		413,539		191,386		1,077,857		17,781		10,033	2,144	36,736		1,344		59,378		20,293
8-03	17,906	2,279,750	4,897	477,829	5,297	418,836	3,124	194,510	13,318	1,091,175	1,131	18,912	266	10,299	1,505	38,241	17	1,361	5,627	65,005	2,190	22,483
8-06	17,213	2,296,963	6,401	484,230	2,533	421,369	1,536	196,046	10,470	1,101,645	994	19,906	252	10,551	2,912	41,153	22	1,383	1,710	66,715	1,121	23,604
8-08	255	2,297,218		484,230		421,369		196,046		1,101,645	411	20,317	102	10,653	1,730	42,883		1,383		66,715		23,604
8-10	4,672	2,301,890	4,673	488,903	2,288	423,657	1,079	197,125	8,040	1,109,685	383	20,700	108	10,761	1,544	44,427	16	1,399	1,113	67,828	856	24,460
8-13	2,398	2,304,288	2,862	491,765	1,230	424,887	1,015	198,140	5,107	1,114,792	277	20,977	110	10,871	1,435	45,862	8	1,407	714	68,542	552	25,012
8-15	815	2,305,103	1,162	492,927	509	425,396	512	198,652	2,183	1,116,975	268	21,245	71	10,942	777	46,639		1,407	242	68,784	233	25,245
8-17	264	2,305,367		492,927		425,396		198,652		1,116,975	155	21,400	88	11,030	832	47,471	15	1,422	169	68,953	455	25,700
8-20	112	2,305,479		492,927		425,396		198,652		1,116,975	98	21,498	17	11,047	758	48,229	4	1,426	138	69,091	419	26,119
8-22	41	2,305,520		492,927		425,396		198,652		1,116,975	63	21,561	39	11,086	729	48,958		1,426	78	69,169	496	26,615
8-24	185	2,305,705		492,927		425,396		198,652		1,116,975	86	21,647	33	11,119	536	49,494	27	1,453	183	69,352	208	26,823
8-27		2,305,705		492,927		425,396		198,652		1,116,975	21	21,668	10	11,129	438	49,932	7	1,460	16	69,368	74	26,897
8-29		2,305,705		492,927		425,396		198,652		1,116,975	25	21,693	7	11,136	290	50,222		1,460	12	69,380	55	26,952
8-31	2	2,305,707		492,927		425,396		198,652		1,116,975	20	21,713	16	11,152	102	50,324	35	1,495	4	69,384	33	26,985
9-03		2,305,707		492,927		425,396		198,652		1,116,975	10	21,723	11	11,163	104	50,428	56	1,551	2	69,386	14	26,999
9-05		2,305,707		492,927		425,396		198,652		1,116,975	1	21,724	8	11,171	2	50,430		1,551		69,386	3	27,002
9-07		2,305,707		492,927		425,396		198,652		1,116,975	1	21,725		11,171	82	50,512	2	1,553		69,386	6	27,008
9-10		2,305,707		492,927		425,396		198,652		1,116,975	2	21,727		11,171	20	50,532	1	1,554		69,386	4	27,012

Table 5 Pink salmon catch by area and date, Upper Cook Inlet, 1990

Date	DRIFT excluding CHINITNA		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-25																						
5-28																						
6-01																						
6-04																						
6-08																			1	1	2	2
6-11																				1		2
6-15																				1		2
6-18																						
6-22																						
6-25	6	6																				
6-29	16	22									2	2			1	1				1	1	3
7-02	93	115	2	2			3	3	5	5	1	3				1			1	2		3
7-06	39	154	5	7	2	2	2	5	9	14	1	4			1	2	1	1	1	3	2	5
7-09	402	556	4	11		2	12	17	16	30	3	7			1	3		1	4	7	2	7
7-13		556		11		2		17		30	5	12	4	4	35	38	2	3	168	175	68	75
7-16	6,071	6,627	742	753	6	8		17	748	778		12	68	72	147	185	5	8	312	487	153	228
7-18	1,232	7,859	571	1,324	21	29	127	144	719	1,497		12		72		185		8		487		228
7-20	27,959	35,818	1,038	2,362	90	119	539	683	1,667	3,164	11	23	11	83	423	608	4	12	2,508	2,995	878	1,106
7-21	2,438	38,256	895	3,257	68	187	539	1,222	1,502	4,666		23		83		608		12		2,995		1,106
7-22	887	39,143	213	3,470	13	200	31	1,253	257	4,923		23		83		608		12		2,995		1,106
7-23	31,466	70,609	3,051	6,521	437	637	711	1,964	4,199	9,122	19	42	54	137	943	1,551	8	20		2,995		1,106
7-25	3,964	74,573	1,228	7,749	228	865		1,964	1,456	10,578		42		137		1,551		20		2,995		1,106
7-26	2,441	77,014	2,085	9,834	407	1,272		1,964	2,492	13,070		42		137		1,551		20		2,995		1,106
7-27	32,850	109,864	2,274	12,108	497	1,769	933	2,897	3,704	16,774	20	62	89	226	724	2,275	6	26	6,535	9,530	1,323	2,429
7-28		109,864		12,108		1,769		2,897		16,774		62		226		2,275		26	168	9,698		2,429
7-29	12,752	122,616	3,678	15,786	794	2,563		2,897	4,472	21,246		62		226		2,275		26	372	10,070		2,429
7-30	29,359	151,975	3,366	19,152	1,337	3,900	1,874	4,771	6,577	27,823	38	100	52	278	504	2,779	17	43	11,985	22,055	2,070	4,499
7-31	8,896	160,871	2,863	22,015	865	4,765	2,849	7,620	6,577	34,400		100		278		2,779		43		22,055		4,499
8-01		160,871		22,015		4,765		7,620		34,400		100		278	651	3,430		43		22,055		4,499
8-03	23,484	184,355	2,749	24,764	6,280	11,045	4,330	11,950	13,359	47,759	48	148	87	365	291	3,721	11	54	9,244	31,299	1,053	5,552
8-06	40,077	224,432	6,116	30,880	6,180	17,225	4,869	16,819	17,165	64,924	81	229	60	425	364	4,085	22	76	1,859	33,158	374	5,926
8-08	232	224,664		30,880		17,225		16,819		64,924	73	302	29	454	904	4,989		76		33,158		5,926
8-10	59,135	283,799	19,079	49,959	30,702	47,927	21,391	38,210	71,172	136,096	100	402	28	482	1,578	6,567	19	95	1,117	34,275	475	6,401
8-13	29,265	313,064	29,261	79,220	15,768	63,695	21,979	60,189	67,008	203,104	115	517	54	536	308	6,875	28	123	780	35,055	742	7,143
8-15	5,904	318,968	13,100	92,320	3,945	67,640	5,280	65,469	22,325	225,429	185	702	25	561	288	7,163		123	205	35,260	210	7,353
8-17	1,514	320,482		92,320		67,640		65,469		225,429	61	763	48	609	470	7,633	10	133	93	35,353	248	7,601
8-20	67	320,549		92,320		67,640		65,469		225,429	33	796	8	617	137	7,770	4	137	51	35,404	177	7,778
8-22	69	320,618		92,320		67,640		65,469		225,429	8	804	17	634	549	8,319		137	38	35,442	252	8,030
8-24	3,318	323,936		92,320		67,640		65,469		225,429	26	830	34	668	260	8,579	20	157	36	35,478	292	8,322
8-27		323,936		92,320		67,640		65,469		225,429	16	846	4	672	20	8,599	5	162	8	35,486	77	8,399
8-29		323,936		92,320		67,640		65,469		225,429	13	859	3	675	6	8,605		162	2	35,488	34	8,433
8-31		323,936		92,320		67,640		65,469		225,429	5	864	1	676		8,605	1	163	1	35,489	10	8,443
9-03		323,936		92,320		67,640		65,469		225,429	1	865	2	678	2	8,607		163	2	35,491	1	8,444
9-05		323,936		92,320		67,640		65,469		225,429		865		678		8,607		163		35,491		8,444
9-07		323,936		92,320		67,640		65,469		225,429	4	869		678	1	8,608	1	164		35,491	6	8,450
9-10		323,936		92,320		67,640		65,469		225,429	1	870		678	1	8,609		164		35,491	3	8,453

Table 6. Chum salmon catch by area and date, Upper Cook Inlet, 1990.

Date	DRIFT excluding CHINITNA		EAST SIDE SET NET														NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-25											2	2	1	1								
5-28											2	4		1								
6-01											3	7		1					2	2		
6-04											13	20		1	1	1	15	15	2	4	11	11
6-08											49	69		1	1	2	2	17	58	62	58	69
6-11											87	156		1	2	4	7	24	128	190	92	161
6-15											112	268		1	3	7	15	39	19	209	9	170
6-18											535	803		1	37	44	224	263	125	334	11	181
6-22												803	2	3	38	82	47	310	396	730	60	241
6-25	1,676	1,676										803		3		82		310		730		241
6-29	4,464	6,140										2,365	10	13	438	520	164	474	2,500	3,230	739	980
7-02	6,101	12,241	2	2	2	2	3	3	7	7	49	69		1	1	2	2	17	58	62	58	69
7-06	20,260	32,501	12	14	1	3	7	10	20	27	87	156		1	2	4	7	24	128	190	92	161
7-09	33,921	66,422	2	16	2	5	1	11	5	32	112	268		1	3	7	15	39	19	209	9	170
7-13		66,422		16		5		11		32	535	803		1	37	44	224	263	125	334	11	181
7-16	64,111	130,533	711	727	1	6		11	712	744		803	2	3	38	82	47	310	396	730	60	241
7-18	3,829	134,362	231	958	5	11	10	21	246	990		803		3		82		310		730		241
7-20	49,600	183,962	266	1,224	12	23	66	87	344	1,334	1,562	2,365	10	13	438	520	164	474	2,500	3,230	739	980
7-21	1,421	185,383	141	1,365	6	29	31	118	178	1,512		2,365		13		520		474		3,230		980
7-22	637	186,020	26	1,391	1	30	7	125	34	1,546		2,365		13		520		474		3,230		980
7-23	17,204	203,224	290	1,681	27	57	43	168	360	1,906	845	3,210	2	15	233	753	719	1,193		3,230		980
7-25	3,587	206,811	60	1,741	7	64		168	67	1,973		3,210		15		753		1,193		3,230		980
7-26	1,220	208,031	138	1,879	10	74		168	148	2,121		3,210		15		753		1,193		3,230		980
7-27	25,562	233,593	184	2,063	11	85	98	266	293	2,414	518	3,728	33	48	95	848	268	1,461	4,696	7,926	252	1,232
7-28		233,593		2,063		85		266		2,414		3,728		48		848		1,461	1,586	9,512		1,232
7-29	7,195	240,788	316	2,379	19	104		266	335	2,749		3,728		48		848		1,461	1,969	11,481		1,232
7-30	18,483	259,271	454	2,833	31	135	231	497	716	3,465	704	4,432	15	63	62	910	151	1,612	6,161	17,642	1,148	2,380
7-31	3,393	262,664	503	3,336	20	155	101	598	624	4,089		4,432		63		910		1,612		17,642		2,380
8-01		262,664		3,336		155		598		4,089		4,432		63	144	1,054		1,612		17,642		2,380
8-03	7,315	269,979	86	3,422	5	160	15	613	106	4,195	1,366	5,798	44	107	120	1,174	1,423	3,035	5,825	23,467	396	2,776
8-06	11,638	281,617	173	3,595	3	163	6	619	182	4,377	966	6,764	15	122	170	1,344	1,005	4,040	2,198	25,665	361	3,137
8-08	274	281,891		3,595		163		619		4,377	390	7,154	12	134	85	1,429		4,040		25,665		3,137
8-10	3,758	285,649	63	3,658	9	172	9	628	81	4,458	316	7,470	26	160	98	1,527	1,614	5,654	2,720	28,385	149	3,286
8-13	2,646	288,295	40	3,698	18	190	49	677	107	4,565	455	7,925	48	208	66	1,593	1,444	7,098	1,721	30,106	193	3,479
8-15	411	288,706	33	3,731	1	191	12	689	46	4,611	329	8,254	25	233	88	1,681		7,098	650	30,756	132	3,611
8-17	282	288,988		3,731		191		689		4,611	191	8,445	30	263	82	1,763	1,499	8,597	321	31,077	147	3,758
8-20	22	289,010		3,731		191		689		4,611	52	8,497	18	281	20	1,783	1,121	9,718	294	31,371	40	3,798
8-22	37	289,047		3,731		191		689		4,611	10	8,507	35	316	50	1,833		9,718	168	31,539	26	3,824
8-24	240	289,287		3,731		191		689		4,611	50	8,557	22	338	66	1,899	491	10,209	140	31,679	18	3,842
8-27		289,287		3,731		191		689		4,611	58	8,615	8	346	9	1,908	275	10,484	48	31,727	5	3,847
8-29		289,287		3,731		191		689		4,611	3	8,618	10	356	5	1,913		10,484	82	31,809	7	3,854
8-31	14	289,301		3,731		191		689		4,611	3	8,621	26	382	1	1,914	101	10,585	22	31,831	7	3,861
9-03		289,301		3,731		191		689		4,611	1	8,622	4	386	2	1,916	48	10,633	1	31,832	7	3,868
9-05		289,301		3,731		191		689		4,611		8,622		386		1,916		10,633		31,832	3	3,871
9-07	1	289,302		3,731		191		689		4,611		8,622		386		1,916	10	10,643		31,832	5	3,876
9-10		289,302		3,731		191		689		4,611		8,622		386		1,916	7	10,650	1	31,833	1	3,877

Table 7. Chinook salmon catch by area and date, Upper Cook Inlet 1990

Date	DRIFT excluding CHINITNA		EAST SIDE SET NET														NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-25													19	19								
5-28													46	65								
6-01													341	406								
6-04													90	496					2,436	2,436	492	492
6-08													16	512						2,436		492
6-11													346	858					1,625	4,061	1,416	1,908
6-15													21	879						4,061		1,908
6-18											126	126	54	933					1,766	5,827	337	2,245
6-22											48	174	3	936						5,827		2,245
6-25	54	54									32	206	26	962	13	13			820	6,647	113	2,358
6-29	81	135									122	328	32	994	41	54	4	4	231	6,878	67	2,425
7-02	53	188	52	52	86	86	112	112	250	250	79	407	47	1,041	5	59		4	50	6,928	17	2,442
7-06	83	271	43	95	88	174	100	212	231	481	38	445	1	1,042	3	62		4	29	6,957	5	2,447
7-09	74	345	51	146	90	264	77	289	218	699	23	468	5	1,047	4	66		4	9	6,966	9	2,456
7-13		345		146		264		289		699	49	517	8	1,055	12	78	1	5	28	6,994	5	2,461
7-16	57	402	130	276	175	439		289	305	1,004		517	9	1,064	7	85		5	30	7,024	3	2,464
7-18	56	458	148	424	124	563	130	419	402	1,406		517		1,064		85		5		7,024		2,464
7-20	25	483	98	522	182	745	138	557	418	1,824	25	542	2	1,066	7	92		5	18	7,042	3	2,467
7-21	37	520	130	652	127	872	147	704	404	2,228		542		1,066		92		5		7,042		2,467
7-22	8	528	9	661	12	884	16	720	37	2,265		542		1,066		92		5		7,042		2,467
7-23	20	548	71	732	140	1,024	157	877	368	2,633	9	551		1,066	1	93		5		7,042		2,467
7-25	11	559	62	794	35	1,059		877	97	2,730		551		1,066		93		5		7,042		2,467
7-26	8	567	118	912	76	1,135		877	194	2,924		551		1,066		93		5		7,042		2,467
7-27	13	580	53	965	86	1,221	127	1,004	266	3,190	4	555	3	1,069	2	95		5	12	7,054	1	2,468
7-28		580		965		1,221		1,004		3,190		555		1,069		95		5		7,054		2,468
7-29	9	589	46	1,011	31	1,252		1,004	77	3,267		555		1,069		95		5	1	7,055		2,468
7-30	9	598	39	1,050	73	1,325	102	1,106	214	3,481	8	563	1	1,070		95		5	7	7,062	4	2,472
7-31	3	601	29	1,079	54	1,379	118	1,224	201	3,682		563		1,070		95		5		7,062		2,472
8-01		601		1,079		1,379		1,224		3,682		563		1,070		95		5		7,062		2,472
8-03	7	608	30	1,109	76	1,455	52	1,276	158	3,840	1	564	1	1,071	1	96		5	10	7,072	3	2,475
8-06	5	613	42	1,151	41	1,496	31	1,307	114	3,954	3	567	2	1,073	1	97	1	6	9	7,081	2	2,477
8-08		613		1,151		1,496		1,307		3,954	2	569		1,073		97		6		7,081		2,477
8-10	2	615	25	1,176	43	1,539	22	1,329	90	4,044	1	570	1	1,074		97		6	6	7,087	5	2,482
8-13	4	619	13	1,189	23	1,562	24	1,353	60	4,104	4	574	2	1,076		97		6	5	7,092		2,482
8-15	1	620	15	1,204	9	1,571	11	1,364	35	4,139		574	4	1,080	1	98		6	1	7,093		2,482
8-17		620		1,204		1,571		1,364		4,139		574		1,080		98		6		7,093	3	2,485
8-20		620		1,204		1,571		1,364		4,139		574		1,080	2	100		6	1	7,094	1	2,486
8-22		620		1,204		1,571		1,364		4,139		574	1	1,081		100		6		7,094	1	2,487
8-24		620		1,204		1,571		1,364		4,139		574		1,081		100	1	7		7,094	1	2,488
8-27		620		1,204		1,571		1,364		4,139		574		1,081		100		7		7,094		2,488
8-29		620		1,204		1,571		1,364		4,139		574	1	1,082	1	101		7		7,094		2,488

Table 8. Coho salmon catch by area and date, Upper Cook Inlet, 1990

Date	DRIFT excluding CHINITNA		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-25																						
5-28																						
6-01																						
6-04																						
6-08													1	1					1	1		
														1						1		
6-11																						
6-15														1						1		
6-18														1						1		
6-22														1					14	15	2	2
6-25	11	11												1						15		2
														1					1	16		2
6-29	98	109									2	2		1	1	1				16		2
7-02	309	418	3	3	1	1	3	3	7	7	6	8	1	2	11	12			12	28	1	3
7-06	1,511	1,929	1	4	1	2	1	4	3	10	14	22	2	4	22	34			98	126	18	21
7-09	5,392	7,321	4	8	4	6	3	7	11	21	19	41	15	19	34	68			20	146	6	27
7-13		7,321		8		6		7		21	128	169	109	128	225	293	5	5	318	464	13	40
7-16	25,315	32,636	816	824	48	54		7	864	885		169	466	594	567	860	4	9	2,399	2,863	28	68
7-18	1,189	33,825	353	1,177	34	88	27	34	414	1,299		169		594		860		9		2,863		68
7-20	35,373	69,198	562	1,739	141	229	261	295	964	2,263	1,223	1,392	648	1,242	3,479	4,339	22	31	11,976	14,839	789	857
7-21	841	70,039	610	2,349	47	276	169	464	826	3,089		1,392		1,242		4,339		31		14,839		857
7-22	298	70,337	62	2,411	10	286	9	473	81	3,170		1,392		1,242		4,339		31		14,839		857
7-23	25,497	95,834	1,340	3,751	287	573	199	672	1,826	4,996	881	2,273	664	1,906	1,778	6,117	20	51		14,839		857
7-25	867	96,701	218	3,969	119	692		672	337	5,333		2,273		1,906		6,117		51		14,839		857
7-26	1,464	98,165	370	4,339	320	1,012		672	690	6,023		2,273		1,906		6,117		51		14,839		857
7-27	35,735	133,900	1,522	5,861	545	1,557	1,170	1,842	3,237	9,260	1,037	3,310	1,243	3,149	2,096	8,213	60	111	9,731	24,570	791	1,648
7-28		133,900		5,861		1,557		1,842		9,260		3,310		3,149		8,213		111	1,251	25,821		1,648
7-29	9,694	143,594	1,972	7,833	761	2,318		1,842	2,733	11,993		3,310		3,149		8,213		111	2,595	28,416		1,648
7-30	30,277	173,871	1,631	9,464	1,181	3,499	1,381	3,223	4,193	16,186	1,601	4,911	1,069	4,218	4,494	12,707	151	262	28,529	56,945	1,568	3,216
7-31	8,970	182,841	999	10,463	486	3,985	1,528	4,751	3,013	19,199		4,911		4,218		12,707		262		56,945		3,216
8-01		182,841		10,463		3,985		4,751		19,199		4,911		4,218	1,784	14,491		262		56,945		3,216
8-03	14,658	197,499	1,157	11,620	691	4,676	1,157	5,908	3,005	22,204	2,601	7,512	1,976	6,194	3,469	17,960	285	547	23,505	80,450	1,651	4,867
8-06	13,671	211,170	901	12,521	565	5,241	940	6,848	2,406	24,610	1,804	9,316	953	7,147	2,879	20,839	137	684	5,535	85,985	1,011	5,878
8-08	2,972	214,142		12,521		5,241		6,848		24,610	1,297	10,613	787	7,934	1,815	22,654		684		85,985		5,878
8-10	12,342	226,484	1,541	14,062	1,390	6,631	1,317	8,165	4,248	28,858	1,740	12,353	516	8,450	2,007	24,661	300	984	5,561	91,546	1,298	7,176
8-13	11,245	237,729	1,751	15,813	1,326	7,957	2,758	10,923	5,835	34,693	1,821	14,174	1,538	9,988	2,019	26,680	426	1,410	3,670	95,216	2,481	9,657
8-15	3,096	240,825	2,469	18,282	1,084	9,041	2,105	13,028	5,658	40,351	1,246	15,420	464	10,452	905	27,585		1,410	3,196	98,412	2,570	12,227
8-17	1,638	242,463		18,282		9,041		13,028		40,351	1,739	17,159	569	11,021	1,267	28,852	758	2,168	2,151	100,563	2,948	15,175
8-20	488	242,951		18,282		9,041		13,028		40,351	1,100	18,259	138	11,159	697	29,549	1,190	3,358	1,013	101,576	2,841	18,016
8-22	536	243,487		18,282		9,041		13,028		40,351	930	19,189	250	11,409	1,303	30,852		3,358	1,596	103,172	4,531	22,547
8-24	1,526	245,013		18,282		9,041		13,028		40,351	939	20,128	181	11,590	650	31,502	1,414	4,772	697	103,869	2,872	25,419
8-27		245,013		18,282		9,041		13,028		40,351	937	21,065	48	11,638	203	31,705	942	5,714	1,531	105,400	2,388	27,807
8-29		245,013		18,282		9,041		13,028		40,351	897	21,962	51	11,689	514	32,219		5,714	1,546	106,946	2,138	29,945
8-31	127	245,140		18,282		9,041		13,028		40,351	684	22,646	63	11,752	205	32,424	867	6,581	227	107,173	1,090	31,035
9-03		245,140		18,282		9,041		13,028		40,351	194	22,840	43	11,795	119	32,543	342	6,923	50	107,223	512	31,547
9-05		245,140		18,282		9,041		13,028		40,351	121	22,961	19	11,814	18	32,561		6,923	41	107,264	223	31,770
9-07	83	245,223		18,282		9,041		13,028		40,351	150	23,111		11,814	124	32,685	202	7,125	23	107,287	306	32,076
9-10		245,223		18,282		9,041		13,028		40,351	98	23,209		11,814	90	32,775	128	7,253	6	107,293	25	32,101
9-14		245,223		18,282		9,041		13,028		40,351		23,209		11,814		32,775		7,253	7	107,300		32,101

Table 9. Commercial catch by gear, statistical area and species, Upper Cook Inlet, 1990.

Gear	District	Subdistrict	Stat Area	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	582	621	2,305,742	246,845	323,955	289,521	3,166,684
Set Net	Central	Upper	244-21	97	687	46,314	5,812	17,110	266	70,189
			244-22	125	677	152,338	7,216	48,359	423	209,013
			244-30	179	1,571	425,396	9,041	67,640	191	503,839
			244-40	159	1,204	492,927	18,282	92,320	3,731	608,464
			All	454	4,139	1,116,975	40,351	225,429	4,611	1,391,505
		Kalgin Is.	246-10	33	71	32,564	24,074	6,729	1,493	64,931
			246-20	12	30	17,968	8,701	1,880	423	29,002
			All	45	101	50,532	32,775	8,609	1,916	93,933
		Chinitna	245-10	11	6	1,519	5,631	145	10,431	17,732
		Western	245-20	9	40	889	5,552	157	460	7,098
			245-30	24	387	12,334	5,170	241	6,073	24,205
			245-40	16	131	7,777	8,385	419	2,070	18,782
			245-50	10	16	727	4,102	53	19	4,917
			All	53	574	21,727	23,209	870	8,622	55,002
		Kustatan	245-55	29	945	6,853	849	18	34	8,699
			245-60	17	137	4,318	10,965	660	352	16,432
			All	37	1,082	11,171	11,814	678	386	25,131
		All	All	535	5,902	1,201,924	113,780	235,731	25,966	1,583,303
	Northern	General	247-10	66	2,816	7,624	17,397	3,790	2,211	33,838
			247-20	33	1,712	9,398	28,157	7,305	7,020	53,592
			247-30	36	1,428	15,086	32,930	15,776	8,518	73,738
			247-41	28	762	3,058	5,834	2,444	2,366	14,464
			247-42	13	74	3,985	6,255	2,409	2,411	15,134
			247-43	15	298	6,785	11,019	3,071	3,999	25,172
			247-50	22	4	23,450	5,708	696	5,308	35,166
			All	135	7,094	69,386	107,300	35,491	31,833	251,104
		Eastern	247-70	29	1,497	13,628	12,365	5,291	3,303	36,084
			247-80	16	549	6,251	7,487	1,372	437	16,096
			247-90	20	442	7,133	12,249	1,790	137	21,751
			All	52	2,488	27,012	32,101	8,453	3,877	73,931
		All	All	180	9,582	96,398	139,401	43,944	35,710	325,035
	All	All	All	648	15,484	1,298,322	253,181	279,675	61,676	1,908,338
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	1,230	16,105	3,604,064	500,026	603,630	351,197	5,075,022

Table 10. Commercial salmon catch per permit by statistical area, Upper Cook Inlet, 1990.

Gear	District	Subdistrict	Stat Area	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	582	1	3,962	424	557	497	5,441
Set Net	Central	Upper	244-21	97	7	477	60	176	3	724
			244-22	125	5	1,219	58	387	3	1,672
			244-30	179	9	2,377	51	378	1	2,815
			244-40	159	8	3,100	115	581	23	3,827
			All	454	9	2,460	89	497	10	3,065
		Kalgin Is.	246-10	33	2	987	730	204	45	1,968
			246-20	12	3	1,497	725	157	35	2,417
			All	45	2	1,123	728	191	43	2,087
		Chinitna	245-10	11	1	138	512	13	948	1,612
		Western	245-20	9	4	99	617	17	51	789
			245-30	24	16	514	215	10	253	1,009
			245-40	16	8	486	524	26	129	1,174
			245-50	10	2	73	410	5	2	492
			All	53	11	410	438	16	163	1,038
		Kustatan	245-55	29	33	236	29	1	1	300
			245-60	17	8	254	645	39	21	967
			All	37	29	302	319	18	10	679
		All	All	535	11	2,247	213	441	49	2,959
	Northern	General	247-10	66	43	116	264	57	34	513
			247-20	33	52	285	853	221	213	1,624
			247-30	36	40	419	915	438	237	2,048
			247-41	28	27	109	208	87	85	517
			247-42	13	6	307	481	185	185	1,164
			247-43	15	20	452	735	205	267	1,678
			247-50	22	0	1,066	259	32	241	1,598
			All	135	53	514	795	263	236	1,860
		Eastern	247-70	29	52	470	426	182	114	1,244
			247-80	16	34	391	468	86	27	1,006
			247-90	20	22	357	612	90	7	1,088
			All	52	48	519	617	163	75	1,422
		All	All	180	53	536	774	244	198	1,806
	All	All	All	648	24	2,004	391	432	95	2,945
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	1,230	13	2,930	407	491	286	4,126

Table 11. Commercial salmon fishery emergency orders issued during the 1990 Upper Cook Inlet season.

Emergency Order No.	Effective Date	Action	Reason
2S-01-90	May 02	Amended the closed waters description in the Big River area. Reduced fishing periods from 3 days per week to 2.	Provide better protection to salmon streams in the area and make more effective use of the open waters.
2S-05-90	July 13	Closed set netting in the Upper Subdistrict and drifting in the Central District on Friday, July 13.	Reduce the harvest rate of Susitna and Kasilof River sockeye salmon.
2S-06-90	July 16	Closed set netting in the Western Subdistrict, that portion of the Upper Subdistrict south of the Blanchard line and drifting within 5 miles of the Kenai Peninsula south of the Blanchard line on Monday, July 16.	Reduce the harvest rate of Crescent River and Kasilof River sockeye salmon.
2S-07-90	July 18	Opened set netting north of the Blanchard Line and drifting between the Blanchard Line and Colliers Dock within 3 miles of shore on Wednesday, July 18 from 9:00 A.M. to 10:00 P.M.	Reduce the escapement rate of sockeye salmon into the Kenai River.
2S-08-90	July 18	Extended the area open under 2S-07-90 to include the set nets from Ninilchik to the Blanchard Line and extended the drift corridor to Ninilchik effective at 12:00 noon.	Rapid improvement in the sockeye salmon escapement rate in the Kasilof River.

Table 11. (Page 2 of 5)

Emergency Order No.	Effective Date	Action	Reason
2S-09-90	July 20	Opened set netting in the Upper Subdistrict from 7:00 P.M. 7/20 until 10:00 P.M. 7/21 and drift gill netting in the three mile corridor from Colliers to Ninilchik on 7/20 from 7:00 P.M. to 10:00 P.M. and 7/21 from 5:00 A.M to 10:00 P.M.	Reduce the escapement rate of sockeye salmon into the Kasilof River.
2S-10-90	July 22	Opened set netting in the Upper Subdistrict from 6:00 P.M., 7/22 until the end of the regular period on 7/23. Closed the Northern District for the regular period on 7/23. Opened drift gill netting in the 3 mile corridor from Colliers Dock to Ninilchik on 7/22 from 6:00 P.M. to 10:00 P.M. and 7/23 from 5:00 A.M. to 7:00 A.M. and restricted drifting to south of the southern end of Kalgin Island for the regular period on July 7/23.	Increase the harvest rate of Kenai River-bound sockeye salmon while reducing the harvest rate of Susitna River-bound sockeye salmon.
2S-11-90	July 25	Opened set netting in the Upper Subdistrict north of the Blanchard Line from noon 7/25 until 10:00 P.M. 7/26. Opened drifting in the 3 mile corridor from Colliers to the Blanchard Line from noon to 10:00 P.M. 7/25 and from 5:00 A.M. to 10:00 P.M. 7/26.	Increase the harvest rate of Kenai River-bound sockeye salmon.

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Emergency Order No.	Effective Date	Action	Reason
2S-12-90	July 26	Opened the Fish Creek Special Harvest Area from 10:00 P.M. 7/26 through 7/29.	Fish Creek sockeye salmon escapement goal assured.
2S-13-90	July 26	Opened set netting in the Upper Subdistrict north of the Blanchard Line from 10:00 P.M. 7/26 until 7:00 A.M. 7/27. Opened drifting in the 3 mile corridor from Colliers to the Blanchard Line from 5:00 A.M. to 7:00 A.M.	Increase the harvest rate of Kenai River-bound sockeye salmon.
2S-14-90	July 27	Opened set netting in the Upper Subdistrict from 7:00 P.M. to 10:00 P.M. 7/27. Opened drifting in a 6 mile corridor from Colliers to Ninilchik from 7:00 P.M. to 10:00 P.M. 7/27.	Increase the harvest rate of Kenai River-bound sockeye salmon.
2S-15-90	July 29	Opened set netting in the Upper Subdistrict north of the Blanchard Line from 6:00 A.M. 7/29 until 7:00 A.M. 7/30. Opened drifting in a 6 mile corridor from Colliers to the Blanchard Line on 7/29 from 6:00 A.M. to 10:00 P.M. and 7/30 from 5:00 A.M. to 7:00 A.M.	Increase the harvest rate of sockeye salmon bound for the Kenai River.

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Emergency Order No.	Effective Date	Action	Reason
2S-16-90	July 30	Opened set netting in the Upper Subdistrict from 7:00 P.M. 7/30 until 10:00 P.M. 7/31. Opened drifting within a 6 mile corridor from Colliers to Ninilchik from 7:00 P.M. to 10:00 P.M. 7/30 and from 5:00 A.M. to 10:00 P.M. 7/31.	Increase the harvest rate of sockeye salmon bound for the Kenai River.
2S-17-90	Aug 1	Opened the Kalgin Island Subdistrict to set netting on 8/1 from 7:00 A.M. to 7:00 P.M.	Reduce the escapement of sockeye salmon into Packers Creek.
2S-18-90	Aug 8	Opened drift and set nets in the Kustatan, Kalgin Island and Western Subdistricts on 8/8 from 7:00 A.M. to 7:00 P.M.	Strong return of Packers Creek sockeye and west side coho salmon.
2S-19-90	Aug 15	Opened drift and set nets in the Central District not including the Chinitna Bay Subdistrict and set nets in the Northern District on 8/15 from 7:00 A.M. to 7:00 P.M.	Strong returns of Kenai River pink salmon, Packers Creek sockeye salmon and western and northern coho salmon.
2S-20-90	Aug 22	Opened set netting in all areas except the Chinitna Bay and Upper Subdistricts and drifting in the Central District not including the Chinitna Bay Subdistrict or within 5 miles of the Kenai Peninsula shoreline each Wednesday from 7:00 A.M. to 7:00 P.M. for the remainder of the season.	Increase the harvest rate on strong returns of late-run coho salmon other than those returning to Kenai Peninsula streams.

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Emergency Order No.	Effective Date	Action	Reason
2S-21-90	Aug 22	Opened the Chinitna Bay Subdistrict to set netting, drifting and seining each Monday and Friday from 7:00 A.M. to 7:00 P.M beginning Friday, August 24.	Local chum salmon return completed and coho salmon return beginning.

Table 12. Commercial salmon fishing periods, Upper Cook Inlet, 1990.

Date	Day	Time	Set Gill Net	Drift Gill Net
May 25	Fri	0700-1900	Big River Area	
May 28	Mon	0700-1900	Big River Area	
June 1	Fri	0700-1900	Big River Area	
June 04	Mon	0700-1300	Northern District, Big River	
		1300-1900	Big River Area	
June 08	Fri	0700-1900	Big River Area	
June 11	Mon	0700-1300	Northern District, Big River	
		1300-1900	Big River Area	
June 15	Fri	0700-1900	Big River Area, Western	
June 18	Mon	0700-1300	Big River, Western, Northern	
		1300-1900	Big River Area, Western	
June 22	Fri	0700-1900	Big River Area, Western	
June 25	Mon	0700-1900	All except Upper Subdistrict	All
June 29	Fri	0700-1900	All except Upper Subdistrict	All
July 2	Mon	0700-1900	All	All
July 6	Fri	0700-1900	All	All
July 9	Mon	0700-1900	All	All
July 13	Fri	0700-1900	All except Upper	Closed
July 16	Mon	0700-1900	All except Western, Upper south of mid-K-Beach	All except within 5 mi. of beach south of mid-K-Beach
July 18	Wed	0900-1200	Upper north of mid K-Beach	Colliers Dock to mid K-Beach within 3 miles of beach
		1200-2200	Upper	Colliers to Ninilchik within 3 miles
July 20	Fri	0700-1900	All	All
		1900-2200	Upper	Colliers to Ninilchik within 3 miles
		2200-2400	Upper	
July 21	Sat	0000-0500	Upper	
		0500-2200	Upper	Colliers to Ninilchik within 3 miles

Table 12. (Page 2 of 3)

Date	Day	Time	Set Gill Net	Drift Gill Net
July 22	Sun	1800-2200	Upper	Colliers to Ninilchik within 3 miles
		2200-2400	Upper	
July 23	Mon	0000-0500	Upper	
		0500-0700	Upper	Colliers to Ninilchik within 3 miles
		0700-1900	All except Northern District	South of Kalgin Island, south of Colliers within 3 miles
July 25	Wed	1200-2200	Upper north of mid K-Beach	Colliers to mid K-Beach within 3 miles
		2200-2400	Upper north of mid K-Beach	
July 26	Thur	0000-0500	Upper north of mid K-Beach	
		0500-2200	Upper north of mid K-Beach	Colliers to mid K-Beach within 3 miles
		2200-2400	Upper n. of mid K-Beach, Knik Arm	
July 27	Fri	0000-0500	Upper n. of mid K-Beach, Knik Arm	
		0500-0700	Upper n. of mid K-Beach, Knik Arm	Colliers to mid K-Beach within 3 miles
		0700-1900	All plus Knik Arm	All
		1900-2200	Upper, Knik Arm	Colliers to Ninilchik within 3 miles
		2200-2400	Knik Arm	
July 28	Sat	0000-2400	Knik Arm	
July 29	Sun	0600-2200	Upper n. of mid K-Beach, Knik Arm	Colliers to mid K-Beach within 6 miles
		2200-2400	Upper n. of mid K-Beach, Knik Arm	
July 30	Mon	0000-0500	Upper n. of mid K-Beach	
		0500-0700	Upper n. of mid K-Beach	Colliers to mid K-Beach within 6 miles
		0700-1900	All	All
		1900-2200	Upper	Colliers to Ninilchik within 6 miles

Table 12. (Page 3 of 3)

Date	Day	Time	Set Gill Net	Drift Gill Net
		2200-2400	Upper	
July 31	Tue	0000-0500	Upper	
		0500-2200	Upper	Colliers to Ninilchik within 6 miles
Aug 1	Wed	0700-1900	Kalgin Island	
Aug 3	Fri	0700-1900	All	All
Aug 6	Mon	0700-1900	All	All
Aug 8	Wed	0700-1900	Western, Kustatan, Kalgin	Western, Kustatan, Kalgin
Aug 10	Fri	0700-1900	All	All
Aug 13	Mon	0700-1900	All	All
Aug 15	Wed	0700-1900	All except Chinitna	All
Aug 17	Fri	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula shore
Aug 20	Mon	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula shore
Aug 22	Wed	0700-1900	All except Upper, Chinitna	All except Chinitna or within 5 miles of Kenai Peninsula
Aug 24	Fri	0700-1900	All except Upper	All plus Chinitna except within 5 m. of Kenai Pen.
Aug 26	Mon	0700-1900	All except Upper	All plus Chinitna except within 5 m. of Kenai Pen.

Fishing continued each Monday, Wednesday and Friday as described for 8/22, 8/24 and 8/26 for the remainder of the season.

Table 13. Buyers and processors of Upper Cook Inlet fishery products, 1990.

Buyer/Processor	Plant Site	Contact	Address
Alaskan Gourmet, Inc.	Anchorage	Paul Schilling	P.O. Box 190733 Anchorage 99519
Allied Processing, Inc.	Kenai	Joe Nord	P.O. Box 5090 Kenai 99611
Anpac, Inc.	Anchorage	Sarah Barber	P.O. Box 92520 Anchorage 99509
Chugach Alaska Fisheries	Port Graham	Larry Cambronero	Fishermen's Center #207 Seattle 98119
Cook Inlet Processing	Kenai	Pat Hardina	P.O. Box 8163 Nikiski 99635
Deep Creek Custom Packing	Ninilchik	Jeff Berger	P.O. Box 39229 Ninilchik 99639
Dragnet Fisheries	Kenai	Jay Cherrier	P.O. Box 3992 Kenai 99611
Ed's Kasilof Seafoods	Kasilof	James Trujillo	P.O. Box 18 Kasilof 99610
Icicle Seafoods, Inc. dba Seward Fisheries	Homer	Thomas W. King	4019 21st Ave. W. Seattle 98199
Inlet Fisheries, Inc.	Kenai	Scott Earsley	P.O. Box 530 Kenai 99611
John Cabot Company	Seldovia	Keith Robbins	Drawer E Seldovia 99663
John Cabot Company	Anchorage	Roy Jones	1200 E. 70th Street Anchorage 99518
Keener Packing Company	Kenai	Michael Sawinski	HC 2 Box 738 Soldotna 99669-9706
Kenai Packers	Kenai	Bruce Eckfeldt	P.O. Box 31179 Seattle 98103
Pacific Alaska Seafood Co. dba Dahmen Seafood	Nikiski	Dan Claus	P.O. Box 7498 Nikiski 99635
Prime Alaska Seafoods	Anchorage	Jack N. Mclean	6135 Mike Street Anchorage 99518
R & J Enterprises	Kasilof	Juanita Meier	4821 E. 101st Street Anchorage 99516
Royal Pacific Fisheries	Kenai	Marvin Dragseth	P.O. Box 4609 Kenai 99611
Salamatof Seafoods	Kenai	Wylie T. Reed	P.O. Box 5070 Kenai 99611
Seafoods from Alaska	Sterling	Roland Schwanke	P.O. Box 307 Sterling 99672

Table 13. (p. 2 of 2)

Sea-Nik Foods	Sterling	James A. Garroutte	P.O. Box 73 Ninilchik 99639
Silvertip Fish	Kasilof	Darrel Renner	P.O. Box 122 Kasilof 99610
Trans-Aqua Int'l Inc.	Kasilof	Fumiya Uchiyama	One Union Sq., #2800 Seattle 98101
Wards Cove Packing Company dba Columbia-Wards	Kenai	Ray Landry	P.O. Box C-5030 Seattle 98105-0030
Way Ward Wind Seafoods	Eagle River	Max Hulse	P.O. Box 770881 Eagle River 99577

Table 14. Age, sex, and size composition of Pacific herring caught in gillnet, Tuxedni Bay, Upper Cook Inlet, 10 May 1990.

		Sex (No.)					Total	Percent of	Weight			Length			Biomass		
	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	No.	Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured	No. Fish X 1000	Tons	Tonnes
10 May	1																
	2																
	3																
	4	0	0	2	0	0	2	1.0	153	35.0	2	225	9.2	2	1	0.2	0.1
	5	22	1	20	1	0	44	12.3	151	17.0	44	224	7.0	44	20	3.4	3.1
	6	88	0	110	0	1	199	55.4	159	16.4	198	227	7.1	199	91	16.0	14.4
	7	47	0	50	0	0	97	27.0	182	24.0	96	237	9.4	97	44	9.0	8.0
	8	5	0	7	0	0	12	3.3	199	23.1	12	246	11.3	12	6	1.2	1.1
	9	4	0	0	0	0	4	1.1	186	31.0	4	245	9.5	4	2	0.4	0.3
	10	1	0	0	0	0	1	0.3	206	0.0	1	264	0.0	1	0	0.1	0.1
	11																
	12																
	13																
	14																
	15																
	16																
Sample Total		167	1	189	1	1	359	100.0	166	23.1	357	230	10.0	359	164	30.0	27.2
Sex Composition		46.5	.3	52.6	.3												
Unaged		11	0	10	0	0	21	100.0	173	39.0	21	232	13.2	21			
Sex Composition		52.4	.0	47.6	.0												

Table 15. Age, sex, and size composition of Pacific herring caught in gillnet, Chinitna Bay, Upper Cook Inlet, 7 May 1990.

		Sex (No.)						Percent	Weight			Length			Biomass		
	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total No.	of Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured	No. Fish X 1000	Tons	Tonnes
7 May	1																
	2																
	3																
	4	2	0	1	0	0	3	1.0	128	16.0	3	221	11.0	3	2	0.3	0.3
	5	32	11	17	0	0	60	16.0	155	20.0	60	231	9.2	60	43	7.3	7.0
	6	64	13	63	0	0	140	37.0	173	20.0	140	239	8.4	140	100	19.0	17.2
	7	53	21	63	0	0	137	36.1	184	23.3	137	244	9.0	137	98	20.0	18.0
	8	10	2	4	0	0	16	4.2	193	29.0	16	247	13.0	16	11	2.4	2.2
	9	7	1	6	0	0	14	4.0	221	40.4	14	255	13.1	14	10	2.4	2.2
	10	4	0	0	0	0	4	1.1	220	23.5	4	260	7.4	4	3	1.0	1.0
	11	3	0	2	0	0	5	1.3	230	61.3	5	264	15.0	5	4	1.0	1.0
	12	1	0	0	0	0	1	0.3	195	0.0	1	242	0.0	1	1	0.2	0.1
	13																
	14																
	15																
	16																
Sample Total		176	48	156	0	0	380	100.0	177	28.2	380	241	11.3	380	271	53.0	48.1
Sex Composition		46.3	12.6	41.1	.0												
Unaged		8	1	10	1	0	20	100.0	177	33.9	20	240	13.0	20			
Sex Composition		40.0	5.0	50.0	5.0												

Table 16. Age, sex, and size composition of Pacific herring caught in gillnet, Eastside, Upper Cook Inlet, 5 May 1990.

		Sex (No.)					Total	Percent of	Weight			Length			Biomass		
	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	No.	Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured	No. Fish X 1000	Tons	Tonnes
	1																
	2																
	3																
	4	3	0	2	0	0	5	1.3	140	15.5	5	218	13.2	5	3	0.4	0.4
	5	13	3	36	0	0	52	14.0	149	16.0	52	221	7.2	52	29	5.0	4.3
	6	40	0	83	0	0	123	32.4	166	16.0	123	228	7.3	123	69	13.0	11.4
	7	58	1	80	0	1	140	37.0	176	19.0	140	234	8.3	140	78	15.1	14.0
5 May	8	10	0	17	0	0	27	7.1	186	19.2	27	236	7.5	27	15	3.1	3.0
	9	6	0	6	0	0	12	3.2	199	24.0	12	244	9.0	12	7	1.5	1.3
	10	8	0	3	0	0	11	3.0	199	28.0	11	243	9.1	11	6	1.3	1.2
	11	5	0	3	0	0	8	2.1	211	25.0	8	242	7.0	8	4	1.0	1.0
	12	0	0	1	0	0	1	0.3	216	0.0	1	247	0.0	1	1	0.1	0.1
	13	1	0	0	0	0	1	0.3	205	0.0	1	251	0.0	1	1	0.1	0.1
	14																
	15																
	16																
Sample Total		144	4	231	0	1	380	100.0	171	23.0	380	231	10.0	380	212	40.0	36.3
Sex Composition		37.9	1.1	60.8	.0												
Unaged		11	1	8	0	0	20	100.0	173	30.3	20	236	15.0	20			
Sex Composition		55.0	5.0	40.0	.0												

Table 17. Seldovia District tide tables, April-September, 1990.

APRIL

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	6:53	17.8	8:23	14.3
2	Mon	7:59	15.9	9:51	13.6
3	Tue	9:29	14.6	11:22	14.0
4	Wed	11:06	14.4	....	...
5	Thur	0:28	15.2	12:25	15.2
6	Fri	1:15	16.5	1:22	16.3
7	Sat	1:53	17.6	2:03	17.2
8	Sun	2:20	18.5	2:41	17.9
9	Mon	2:47	19.1	3:15	18.3
10	Tue	3:15	19.5	3:50	18.4
11	Wed	3:40	19.5	4:22	18.0
12	Thur	4:07	19.2	4:57	17.3
13	Fri	4:36	18.6	5:33	16.3
14	Sat	5:07	17.7	6:11	15.0
15	Sun	5:39	16.6	6:59	13.7
16	Mon	6:16	15.4	7:56	12.6
17	Tue	7:04	14.1	9:11	12.1
18	Wed	8:20	13.1	10:31	12.5
19	Thur	9:53	13.0	11:33	13.7
20	Fri	11:17	13.8	....	...
21	Sat	0:17	15.3	12:22	15.3
22	Sun	0:57	17.2	1:18	16.9
23	Mon	1:34	18.9	2:08	18.4
24	Tue	2:11	20.5	2:54	19.5
25	Wed	2:51	21.6	3:41	19.9
26	Thur	3:31	22.0	4:28	19.7
27	Fri	4:15	21.8	5:18	18.9
28	Sat	5:00	20.8	6:11	17.7
29	Sun	5:50	19.2	7:06	16.4
30	Mon	6:45	17.3	8:13	15.2

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	....	...	1:41	-0.1
2	Mon	1:54	5.7	3:00	1.4
3	Tue	3:23	6.5	4:31	2.0
4	Wed	5:05	5.9	5:51	1.7
5	Thur	6:18	4.4	6:46	1.1
6	Fri	7:10	2.6	7:29	0.7
7	Sat	7:52	1.1	8:04	0.5
8	Sun	8:27	-0.2	8:36	0.5
9	Mon	9:01	-1.1	9:06	0.8
10	Tue	9:31	-1.6	9:37	1.3
11	Wed	10:03	-1.7	10:08	1.9
12	Thur	10:33	-1.4	10:40	2.9
13	Fri	11:05	-0.7	11:12	4.0
14	Sat	11:39	0.3	11:47	5.1
15	Sun	....	...	12:16	1.4
16	Mon	0:24	6.3	1:03	2.5
17	Tue	1:15	7.3	2:05	3.5
18	Wed	2:29	7.9	3:22	3.9
19	Thur	4:05	7.5	4:42	3.5
20	Fri	5:22	5.9	5:44	2.7
21	Sat	6:20	3.6	6:33	1.7
22	Sun	7:08	1.0	7:18	0.8
23	Mon	7:51	-1.5	8:00	0.2
24	Tue	8:33	-3.6	8:45	-0.1
25	Wed	9:17	-5.0	9:27	0.1
26	Thur	10:01	-5.6	10:11	0.6
27	Fri	10:49	-5.3	10:57	1.5
28	Sat	11:36	-4.2	11:47	2.7
29	Sun	....	...	12:29	-2.6
30	Mon	0:43	4.0	1:28	-0.8

MAY

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Tue	7:54	15.5	9:27	14.7
2	Wed	9:14	14.1	10:38	14.8
3	Thur	10:40	13.7	11:40	15.5
4	Fri	11:59	14.1	....	...
5	Sat	0:27	16.2	12:54	14.8
6	Sun	1:05	17.0	1:42	15.6
7	Mon	1:35	17.6	2:22	16.3
8	Tue	2:04	18.1	2:59	16.8
9	Wed	2:37	18.5	3:33	17.0
10	Thur	3:06	18.6	4:08	17.0
11	Fri	3:38	18.5	4:44	16.6
12	Sat	4:10	18.1	5:23	16.0
13	Sun	4:46	17.4	6:03	15.2
14	Mon	5:21	16.5	6:48	14.4
15	Tue	6:06	15.5	7:37	13.8
16	Wed	6:56	14.4	8:29	13.6
17	Thur	8:01	13.5	9:28	14.0
18	Fri	9:19	13.1	10:24	14.8
19	Sat	10:39	13.4	11:16	16.0
20	Sun	11:51	14.4	....	...
21	Mon	0:04	17.5	12:54	15.8
22	Tue	0:49	19.0	1:50	17.1
23	Wed	1:37	20.2	2:43	18.2
24	Thur	2:22	21.1	3:32	18.8
25	Fri	3:11	21.4	4:21	19.0
26	Sat	3:58	21.2	5:10	18.6
27	Sun	4:49	20.3	6:03	18.0
28	Mon	5:42	18.9	6:55	17.2
29	Tue	6:36	17.2	7:49	16.5
30	Wed	7:36	15.5	8:43	15.9
31	Thur	8:42	14.0	9:42	15.5

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Tue	1:49	5.0	2:36	0.9
2	Wed	3:14	5.4	3:53	1.9
3	Thur	4:40	4.8	5:03	2.4
4	Fri	5:51	3.5	6:01	2.6
5	Sat	6:46	2.1	6:49	2.7
6	Sun	7:26	0.8	7:26	2.8
7	Mon	8:01	-0.3	8:00	2.8
8	Tue	8:35	-1.1	8:35	2.9
9	Wed	9:08	-1.6	9:09	3.0
10	Thur	9:39	-1.8	9:43	3.4
11	Fri	10:12	-1.6	10:18	3.9
12	Sat	10:46	-1.2	10:55	4.5
13	Sun	11:23	-0.5	11:34	5.2
14	Mon	....	...	NOON	0.3
15	Tue	0:16	5.9	12:45	1.1
16	Wed	1:09	6.4	1:37	2.0
17	Thur	2:13	6.4	2:34	2.6
18	Fri	3:27	5.8	3:42	3.1
19	Sat	4:39	4.3	4:47	3.1
20	Sun	5:43	2.2	5:45	2.9
21	Mon	6:36	-0.1	6:39	2.4
22	Tue	7:26	-2.4	7:31	2.0
23	Wed	8:14	-4.2	8:20	1.6
24	Thur	9:01	-5.4	9:09	1.4
25	Fri	9:48	-5.8	9:57	1.5
26	Sat	10:36	-5.5	10:46	1.8
27	Sun	11:26	-4.5	11:39	2.4
28	Mon	....	...	12:16	-3.1
29	Tue	0:35	3.2	1:09	-1.3
30	Wed	1:36	3.8	2:05	0.4
31	Thur	2:46	4.1	3:03	2.1

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JUNE

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Fri	10:00	13.1	10:37	15.5
2	Sat	11:16	12.9	11:25	15.7
3	Sun	....	...	12:25	13.3
4	Mon	0:09	16.0	1:18	13.9
5	Tue	o:49	16.5	2:04	14.7
6	Wed	1:26	17.0	2:43	15.4
7	Thur	2:03	17.5	3:19	15.9
8	Fri	2:40	17.8	3:58	16.3
9	Sat	3:17	18.0	4:33	16.4
10	Sun	3:54	18.0	5:12	16.3
11	Mon	4:33	17.6	5:50	16.1
12	Tue	5:13	17.0	6:26	15.8
13	Wed	5:55	16.2	7:08	15.6
14	Thur	6:43	15.3	7:49	15.6
15	Fri	7:41	14.3	8:35	15.7
16	Sat	8:49	13.5	9:27	16.1
17	Sun	10:05	13.2	10:22	16.7
18	Mon	11:24	13.7	11:19	17.5
19	Tue	....	...	12:36	14.7
20	Wed	0:17	18.5	1:39	15.9
21	Thur	1:13	19.5	2:35	17.2
22	Fri	2:08	20.4	3:25	18.1
23	Sat	2:59	20.9	4:13	18.7
24	Sun	3:51	20.8	4:58	18.9
25	Mon	4:40	20.3	5:44	18.8
26	Tue	5:29	19.1	6:27	18.4
27	Wed	6:19	17.6	7:11	17.7
28	Thur	7:09	15.9	7:54	16.9
29	Fri	8:05	14.2	8:39	16.1
30	Sat	9:11	12.8	9:27	15.5

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Fri	4:00	3.9	4:06	3.4
2	Sat	5:10	3.2	5:06	4.3
3	Sun	6:09	2.3	5:57	4.8
4	Mon	6:54	1.3	6:44	5.0
5	Tue	7:34	0.4	7:31	4.9
6	Wed	8:11	-0.4	8:08	4.7
7	Thur	8:46	-1.1	8:48	4.5
8	Fri	9:22	-1.5	9:25	4.3
9	Sat	9:57	-1.7	10:02	4.2
10	Sun	10:33	-1.7	10:41	4.3
11	Mon	11:09	-1.4	11:21	4.5
12	Tue	11:45	-0.9	....	...
13	Wed	0:03	4.6	12:24	-0.3
14	Thur	0:53	4.7	1:06	0.8
15	Fri	1;49	4.5	1:54	1.8
16	Sat	2:49	3.9	2:53	2.9
17	Sun	3:59	2.9	3:55	3.8
18	Mon	5:06	1.4	5:04	4.2
19	Tue	6:09	-0.5	6:09	4.1
20	Wed	7:07	-2.3	7:09	3.6
21	Thur	8:00	-3.8	8:04	2.9
22	Fri	8:51	-4.9	8:57	2.2
23	Sat	9:39	-5.4	9:47	1.6
24	Sun	10:25	-5.3	10:37	1.4
25	Mon	11:10	-4.5	11:26	1.6
26	Tue	11:54	-3.1	....	...
27	Wed	0:16	2.0	12:37	-1.4
28	Thur	1:08	2.6	1:22	0.6
29	Fri	2:04	3.2	2:07	2.6
30	Sat	3:08	3.6	2:59	4.4

JULY

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	10:27	12.1	10:17	15.1
2	Mon	11:48	12.1	11:11	15.0
3	Tue	....	...	12:57	12.8
4	Wed	0:04	15.3	1:50	13.7
5	Thur	0:54	16.0	2:32	14.6
6	Fri	1:39	16.7	3:09	15.5
7	Sat	2:24	17.5	3:44	16.3
8	Sun	3:04	18.1	4:18	16.9
9	Mon	3:43	18.5	4:50	17.3
10	Tue	4:22	18.5	5:21	17.6
11	Wed	5:00	18.2	5:57	17.7
12	Thur	5:42	17.5	6:29	17.7
13	Fri	6:27	16.4	7:06	17.6
14	Sat	7:20	15.2	7:49	17.4
15	Sun	8:23	14.0	8:38	17.1
16	Mon	9:41	13.1	9:38	16.9
17	Tue	11:08	13.1	10:47	17.1
18	Wed	12:30p	14.1	11:59	17.8
19	Thur	....	...	1:37	15.5
20	Fri	1:05	18.8	2:30	17.0
21	Sat	2:01	19.8	3:15	18.3
22	Sun	2:53	20.6	3:57	19.2
23	Mon	3:43	20.8	4:36	19.7
24	Tue	4:28	20.5	5:15	19.8
25	Wed	5:10	19.5	5:50	19.4
26	Thur	5:55	18.1	6:24	18.7
27	Fri	6:37	16.5	7:01	17.7
28	Sat	7:25	14.7	7:36	16.6
29	Sun	8:18	13.1	8:18	15.5
30	Mon	9:32	11.9	9:08	14.6
31	Tue	11:06	11.5	10:15	14.2

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	4:13	3.6	3:58	5.8
2	Mon	5:23	3.2	5:04	6.6
3	Tue	6:22	2.5	6:07	6.8
4	Wed	7;13	1.6	7:02	6.5
5	Thur	7:55	0.6	7:47	5.9
6	Fri	8:32	-0.4	8:30	5.1
7	Sat	9:07	-1.2	9:09	4.4
8	Sun	9:42	-1.8	9:48	3.8
9	Mon	10:16	-2.1	10:25	3.3
10	Tue	10:49	-2.1	11:05	2.9
11	Wed	11:23	-1.7	11:44	2.6
12	Thur	11:58	-0.8	....	...
13	Fri	0:29	2.5	12:37	0.4
14	Sat	1:20	2.4	1:20	1.9
15	Sun	2:15	2.3	2:13	3.5
16	Mon	3:24	2.0	3:16	4.9
17	Tue	4:38	1.3	4:35	5.7
18	Wed	5:53	0.1	5:51	5.5
19	Thur	6:57	-1.4	7:00	4.6
20	Fri	7:53	-2.9	7:58	3.3
21	Sat	8:43	-4.0	8:49	2.1
22	Sun	9:28	-4.5	9:38	1.1
23	Mon	10:08	-4.5	10:23	0.5
24	Tue	10:47	-3.7	11:05	0.5
25	Wed	11:26	-2.4	11:49	0.8
26	Thur	....	...	12:01	-0.6
27	Fri	0:32	1.6	12:37	1.4
28	Sat	1:16	2.5	1:17	3.5
29	Sun	2:05	3.5	1:57	5.5
30	Mon	3:07	4.2	2:52	7.1
31	Tue	4:29	4.5	4:11	8.1

Table 17. (page 3 of 3)

AUGUST

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Wed	12:44p	12.2	11:27	14.4
2	Thur	....	...	1:37	13.4
3	Fri	0:33	15.3	2:16	14.6
4	Sat	1:27	16.5	2:48	15.9
5	Sun	2:09	17.7	3:17	17.0
6	Mon	2:49	18.8	3:49	18.1
7	Tue	3:27	19.5	4:17	18.9
8	Wed	4:05	19.8	4:46	19.5
9	Thur	4:45	19.5	5:18	19.7
10	Fri	5:26	18.8	5:50	19.6
11	Sat	6:11	17.6	6:27	19.2
12	Sun	7:03	16.0	7:09	18.4
13	Mon	8:05	14.4	8:02	17.5
14	Tue	9:27	13.2	9:09	16.6
15	Wed	11:06	13.1	10:35	16.4
16	Thur	12:33p	14.3	11:59	17.0
17	Fri	....	...	1:32	16.0
18	Sat	1:08	18.3	2:18	17.6
19	Sun	2:00	19.5	2:57	19.0
20	Mon	2:48	20.4	3:32	20.0
21	Tue	3:30	20.8	4:06	20.6
22	Wed	4:09	20.5	4:36	20.6
23	Thur	4:49	19.8	5:07	20.2
24	Fri	5:26	18.5	5:36	19.4
25	Sat	6:06	17.0	6:06	18.2
26	Sun	6:45	15.3	6:37	16.9
27	Mon	7:36	13.5	7:14	15.6
28	Tue	8:44	12.1	8:05	14.4
29	Wed	10:30	11.5	9:21	13.5
30	Thur	12:20p	12.2	10:58	13.7

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Wed	5:51	4.0	5:35	8.2
2	Thur	6:54	2.9	6:41	7.4
3	Fri	7:39	1.6	7:31	6.3
4	Sat	8:14	0.3	8:14	5.0
5	Sun	8:46	-0.8	8:52	3.7
6	Mon	9:17	-1.7	9:28	2.5
7	Tue	9:50	-2.2	10:04	1.5
8	Wed	10:22	-2.1	10:41	0.7
9	Thur	10:56	-1.6	11:20	0.4
10	Fri	11:31	-0.5	....	...
11	Sat	0:03	0.3	12:10	1.0
12	Sun	0:50	0.6	12:53	2.8
13	Mon	1:44	1.2	1:45	4.7
14	Tue	2:55	1.8	2:55	6.2
15	Wed	4:21	1.8	4:23	6.9
16	Thur	5:46	0.9	5:51	6.2
17	Fri	6:54	-0.5	7:00	4.6
18	Sat	7:47	-1.8	7:55	2.9
19	Sun	8:30	-2.8	8:40	1.3
20	Mon	9:09	-3.2	9:23	0.1
21	Tue	9:44	-2.9	10:02	-0.5
22	Wed	10:18	-2.2	10:41	-0.5
23	Thur	10:54	-0.9	11:16	-0.1
24	Fri	11:25	0.8	11:52	0.7
25	Sat	11:58	2.6	....	...
26	Sun	0:29	1.9	12:32	4.6
27	Mon	1:12	3.2	1:09	6.4
28	Tue	2:05	4.5	1:57	8.0
29	Wed	3:24	5.4	3:22	9.1
30	Thur	5:14	5.1	5:11	8.9

SEPTEMBER

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sat	0:15	14.8	1:47	15.0
2	Sun	1:07	16.3	2:14	16.6
3	Mon	1:50	17.9	2:43	18.0
4	Tue	2:30	19.3	3:09	19.4
5	Wed	3:09	20.2	3:38	20.5
6	Thur	3:47	20.7	4:07	21.2
7	Fri	4:29	20.5	4:41	21.4
8	Sat	5:10	19.7	5:15	21.0
9	Sun	5:58	18.3	5:54	20.2
10	Mon	6:51	16.5	6:40	18.8
11	Tue	7:56	14.7	7:36	17.2
12	Wed	9:23	13.6	8:57	15.9
13	Thur	11:06	13.9	10:34	15.6
14	Fri	....	...	12:22	15.2
15	Sat	0:01	16.5	1:15	16.9
16	Sun	1:05	17.8	1:55	18.4
17	Mon	1:55	19.0	2:30	19.6
18	Tue	2:37	19.8	3:01	20.5
19	Wed	3:15	20.2	3:30	20.9
20	Thur	3:51	20.1	3:57	20.9
21	Fri	4:25	19.5	4:25	20.4
22	Sat	5:02	18.5	4:52	19.6
23	Sun	5:38	17.2	5:21	18.4
24	Mon	6:16	15.6	5:52	17.1
25	Tue	7:04	14.0	6:27	15.7
26	Wed	8:10	12.6	7:14	14.3
27	Thur	9:48	11.9	8:39	13.2
28	Fri	11:32	12.6	10:21	13.2
29	Sat	12:25p	13.9	11:45	14.3
30	Sun	....	...	1:00	15.5

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sat	7:10	2.5	7:13	6.1
2	Sun	7:45	1.1	7:52	4.3
3	Mon	8:16	-0.2	8:28	2.5
4	Tue	8:48	-1.0	9:04	0.8
5	Wed	9:20	-1.5	9:39	-0.6
6	Thur	9:53	-1.4	10:15	-1.5
7	Fri	10:27	-0.7	10:57	-1.9
8	Sat	11:06	0.5	11:39	-1.6
9	Sun	11:47	2.1	....	...
10	Mon	0:27	-0.7	12:32	3.9
11	Tue	1:24	0.6	1:28	5.8
12	Wed	2:36	1.8	2:47	7.0
13	Thur	4:09	2.3	4:27	7.1
14	Fri	5:37	1.6	5:56	5.8
15	Sat	6:41	0.5	6:57	3.8
16	Sun	7:29	-0.5	7:47	1.9
17	Mon	8:08	-1.1	8:25	0.3
18	Tue	8:43	-1.2	9:04	0.7
19	Wed	9:16	-0.8	9:37	-1.3
20	Thur	9:48	-0.1	10:11	-1.3
21	Fri	10:19	1.0	10:43	-0.8
22	Sat	10:49	2.4	11:15	0.1
23	Sun	11:21	3.9	11:50	1.3
24	Mon	11:54	5.5	....	...
25	Tue	0:29	2.7	12:32	7.1
26	Wed	1:12	4.2	1:24	8.5
27	Thur	2:26	5.3	2:50	9.4
28	Fri	4:11	5.5	4:42	9.0
29	Sat	5:35	4.6	5:57	7.4
30	Sun	6:25	3.3	6:45	5.4

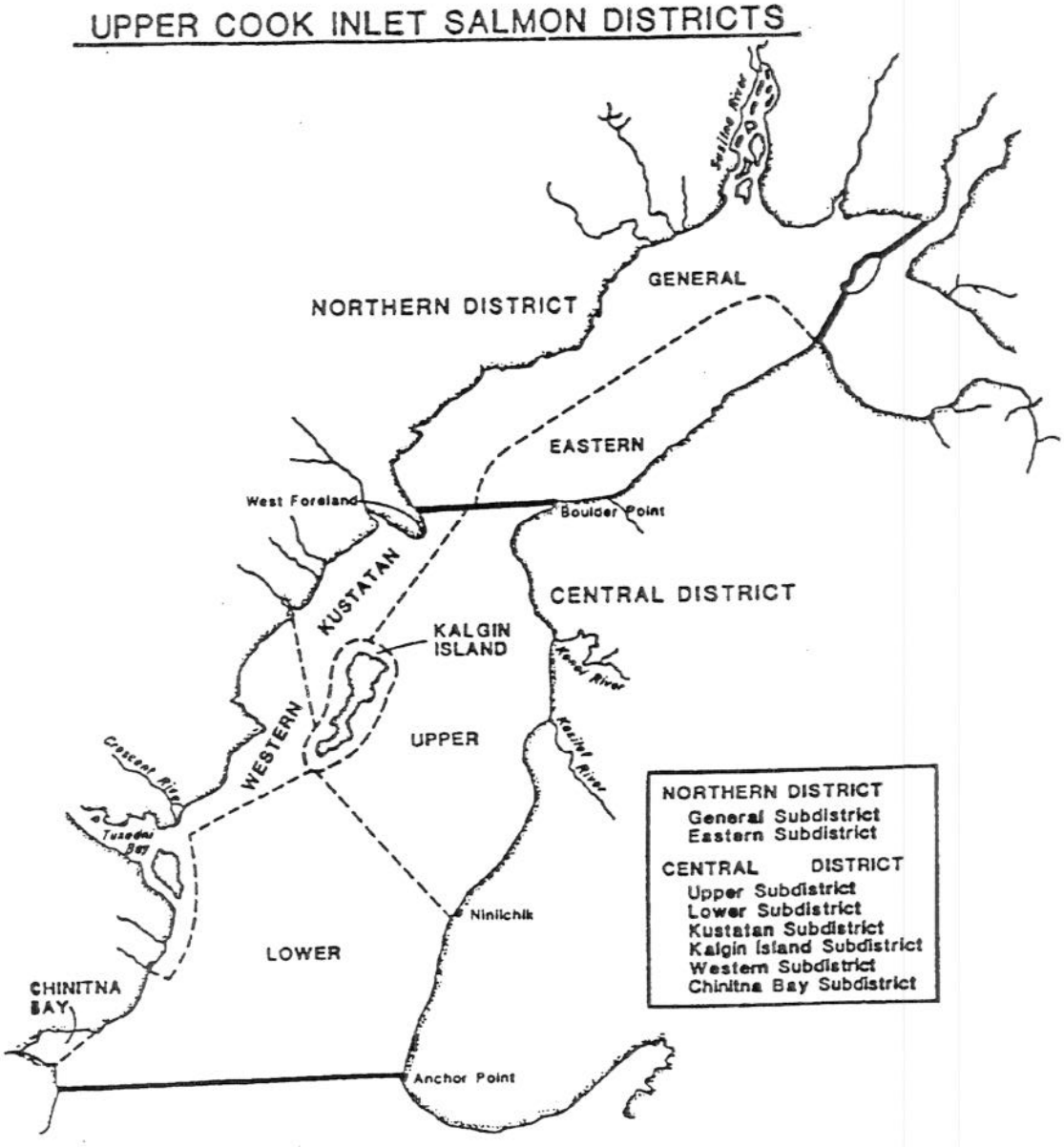
Table 18. Kasilof River personal use gill net fishery salmon harvest by period, 21 June - 29 June, 1990.

Period	Total	Sockeye Salmon		Chinook Salmon	
Date	Nets	Period	Accum	Period	Accum
6/21	137	366	366	24	24
6/22	146	618	984	5	29
6/23	147	845	1,829	29	58
6/24	134	805	2,634	14	72
6/25	114	773	3,407	15	87
6/26	97	863	4,270	24	111
6/27	100	851	5,121	6	117
6/28	74	829	5,950	4	121
6/29	108	1,173	7,123	12	133

Table 19. Central and Northern Districts personal use coho salmon fishery harvest by period, 1990.

Date	Total Nets	Coho Salmon/Net	Coho Salmon Catch	
			Period	Accum
9/16-17	224	4.5	1,014	1,014
9/23-24	147	8.7	1,276	2,290

Figure 1.


UPPER COOK INLET SALMON DISTRICTS
Susitna River
NORTHERN DISTRICT
GENERAL
EASTERN
West Foreland
Boulder Point
CENTRAL DISTRICT
KUSTATAN
KALGIN ISLAND
Kenai River
WESTERN
UPPER
Crescent River
Tuxedni Bay
Kasilof River
Ninilchik
LOWER
CHINITNA BAY
Anchor Point
NORTHERN DISTRICT
General Subdistrict
Eastern Subdistrict
CENTRAL DISTRICT
Upper Subdistrict
Lower Subdistrict
Kustatan Subdistrict
Kalgin Island Subdistrict
Western Subdistrict
Chinitna Bay Subdistrict

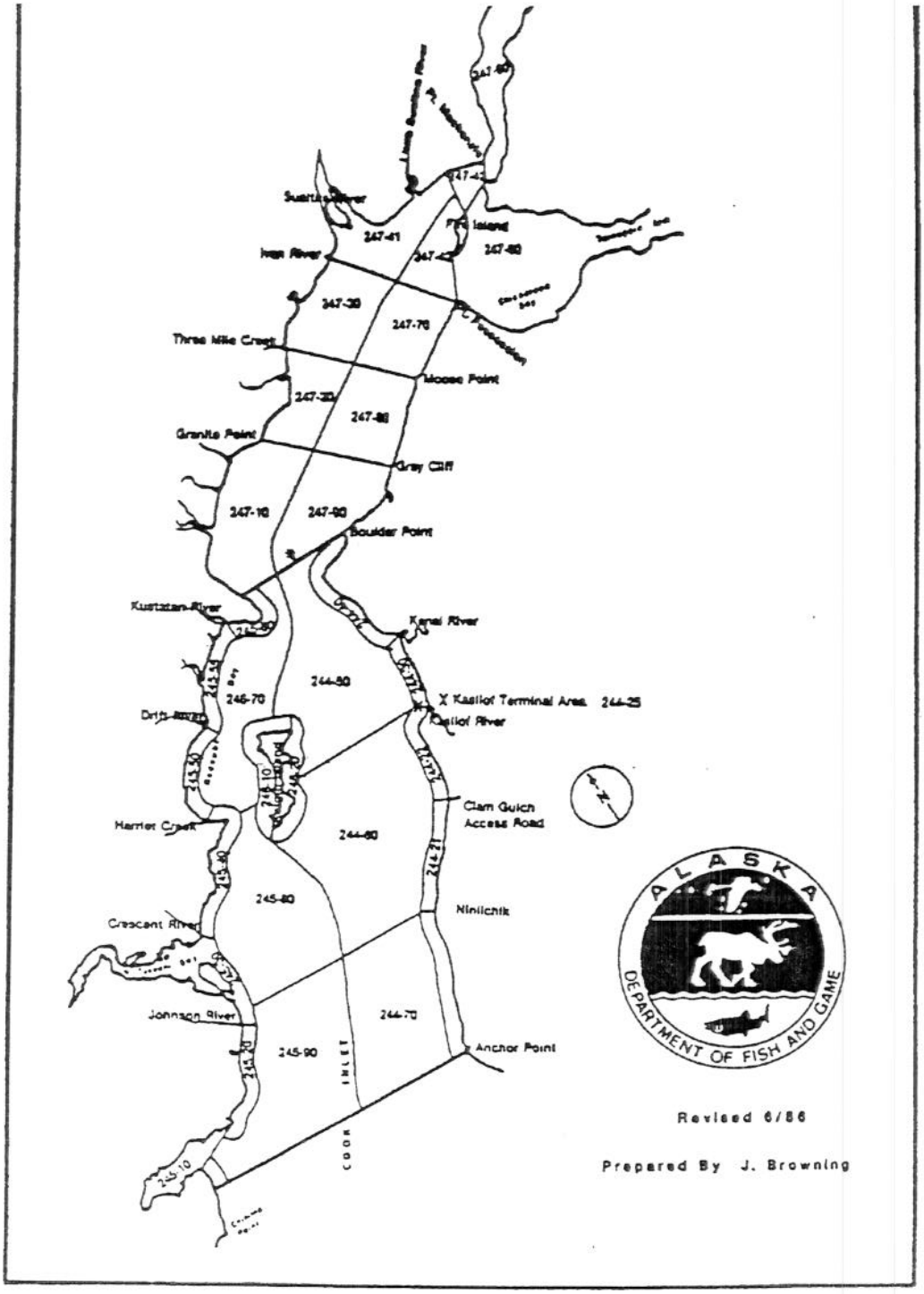


Figure 2. Upper Cook Inlet statistical area map.

Appendix A.1. Upper Cook Inlet commercial chinook salmon harvest by gear type and area, 1966-1990.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	392	4.6	7,329	85.8	401	4.7	422	4.9	8,544
1967	489	6.2	6,686	85.1	500	6.4	184	2.3	7,859
1968	182	4.0	3,304	72.8	579	12.8	471	10.4	4,536
1969	363	2.9	5,834	47.0	3,295	26.6	2,904	23.4	12,407
1970	367	4.4	5,366	64.2	1,165	13.9	1,460	17.5	8,358
1971	237	1.2	7,055	35.7	2,875	14.5	9,598	48.6	19,765
1972	375	2.3	8,600	53.5	2,199	13.7	4,912	30.5	16,086
1973	244	4.7	4,411	84.9	369	7.1	170	3.3	5,194
1974	422	6.4	5,570	84.6	425	6.5	169	2.6	6,586
1975	250	5.2	3,678	77.1	716	15.0	129	2.7	4,773
1976	692	6.4	8,249	75.9	1,469	13.5	457	4.2	10,867
1977	3,411	23.1	9,732	65.8	1,084	7.3	565	3.8	14,792
1978	2,072	12.0	12,468	72.1	2,093	12.1	669	3.9	17,302
1979	1,089	7.9	8,671	63.1	2,264	16.5	1,714	12.5	13,738
1980	889	6.4	9,643	69.9	2,273	16.5	990	7.2	13,795
1981	2,319	18.9	8,359	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,124	5.4	15,043	72.9	3,534	17.1	933	4.5	20,634
1984	1,377	13.7	6,165	61.4	1,495	14.9	1,004	10.0	10,041
1985	2,046	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,086
1986	1,834	4.7	19,810	50.5	2,108	5.4	15,488	39.5	39,240
1987	4,552	11.5	21,379	53.9	1,029	2.6	12,701	32.0	39,661
1988	2,217	7.6	12,870	44.3	1,137	3.9	12,836	44.2	29,060
1989	0	0.0	10,919	40.8	3,092	11.6	12,731	47.6	26,742
1990	621	3.9	4,319	25.7	1,763	10.9	9,582	59.5	16,105
Average[1]	1,202	7.4	9,406	64.7	1,635	11.4	3,445	16.4	15,689

[1] 1989 excluded from averages.

Appendix A.2. Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966-1990.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	1,103,261	59.6	485,330	26.2	132,443	7.2	131,080	7.1	1,852,114
1967	890,152	64.5	305,431	22.1	66,414	4.8	118,065	8.6	1,380,062
1968	561,737	50.8	317,535	28.7	85,049	7.7	140,575	12.7	1,104,904
1969	371,751	53.7	210,877	30.5	71,191	10.3	38,065	5.5	692,244
1970	474,718	63.6	142,701	19.1	62,724	8.4	66,458	8.9	746,634
1971	423,107	66.4	111,505	17.5	61,639	9.7	40,533	6.4	636,798
1972	505,935	57.5	204,617	23.3	83,422	9.5	85,737	9.7	879,724
1973	375,695	56.1	188,743	28.2	59,973	9.0	45,614	6.8	670,025
1974	265,751	53.5	136,889	27.5	52,957	10.7	41,563	8.4	497,160
1975	368,116	54.2	177,336	26.1	67,758	10.0	65,526	9.7	678,736
1976	1,055,767	63.4	476,376	28.6	62,338	3.7	69,649	4.2	1,664,131
1977	1,073,098	52.3	751,368	36.6	104,265	5.1	123,780	6.0	2,052,511
1978	1,803,358	68.8	660,918	25.2	105,767	4.0	51,624	2.0	2,621,667
1979	454,707	49.2	248,828	26.9	108,422	11.7	112,449	12.2	924,415
1980	770,247	48.9	559,812	35.6	137,922	8.8	105,647	6.7	1,573,637
1981	633,145	44.0	496,193	34.5	60,220	4.2	249,662	17.3	1,439,235
1982	2,103,429	64.5	971,423	29.8	66,952	2.1	118,060	3.6	3,259,864
1983	3,222,007	63.8	1,508,963	29.9	134,544	2.7	184,219	3.6	5,049,733
1984	1,234,669	58.6	490,273	23.3	161,953	7.7	218,695	10.4	2,105,860
1985	2,032,957	50.1	1,561,031	38.4	285,081	7.0	181,191	4.5	4,060,260
1986	2,834,534	59.2	1,657,904	34.6	153,714	3.2	141,830	3.0	4,787,982
1987	5,631,746	59.3	3,495,802	36.8	208,036	2.2	164,602	1.7	9,500,186
1988	4,129,878	60.4	2,428,597	35.5	146,154	2.1	129,713	1.9	6,834,342
1989	3	0.0	4,543,066	90.7	186,828	3.7	280,801	5.6	5,010,698
1990	2,305,742	64.0	1,116,975	31.0	84,949	2.4	96,398	2.7	3,604,064
Average[1]	1,442,729	57.8	779,393	29.0	106,829	6.4	113,364	6.8	2,442,345

[1] 1989 excluded from average.

Appendix A.3. Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966-1990.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,064	32.8	18,988	18.8	28,392	28.1	20,425	20.2	100,869
1970	114,392	40.9	30,318	10.8	52,363	18.7	82,722	29.6	279,795
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,578	26.7	24,673	30.5	15,319	18.9	19,346	23.9	80,916
1973	31,784	30.5	23,901	22.9	24,744	23.7	23,944	22.9	104,373
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,569	39.9	46,209	20.8	53,910	24.3	33,051	14.9	221,739
1976	80,731	38.7	47,873	22.9	42,224	20.2	37,850	18.1	208,678
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,252	34.8	34,141	15.6	61,711	28.1	47,256	21.5	219,360
1979	114,496	43.2	29,727	11.2	68,306	25.8	52,635	19.8	265,164
1980	89,510	33.0	40,281	14.8	51,487	19.0	90,098	33.2	271,376
1981	226,257	46.6	36,031	7.4	88,492	18.2	134,362	27.7	485,142
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,962	63.3	37,666	7.3	97,827	18.9	53,867	10.4	516,322
1984	213,336	47.4	37,166	8.3	84,615	18.8	114,786	25.5	449,903
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,405	66.9	76,385	10.1	85,932	11.4	88,108	11.6	756,830
1987	202,306	44.8	74,977	16.6	74,930	16.6	98,920	21.9	451,404
1988	277,703	49.6	55,419	9.9	77,058	13.8	149,742	26.7	560,022
1989	743	0.2	81,744	24.1	81,004	23.9	175,710	51.8	339,201
1990	246,845	49.4	40,351	8.1	73,429	14.7	139,401	27.9	500,026
Average[1]	164,438	42.4	45,863	15.5	65,752	20.3	72,271	21.8	348,340

[1] 1989 excluded from average.

Appendix A.4. Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966-1990.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.2	13,038	40.5	3,256	10.1	8,460	26.2	32,229
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,336	25.1	11,416	34.4	5,714	17.2	7,680	23.2	33,146
1970	346,485	41.9	281,067	34.0	24,763	3.0	174,193	21.1	826,508
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,096	18.3	403,706	64.2	18,936	3.0	90,830	14.5	628,568
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,249	42.1	326,183
1974	140,734	29.1	291,408	60.2	9,014	1.9	42,879	8.9	484,035
1975	113,868	33.9	112,423	33.5	18,385	5.5	90,953	27.1	335,629
1976	599,600	47.7	479,009	38.1	30,044	2.4	148,090	11.8	1,256,743
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,178	55.3	372,865	22.1	54,785	3.2	327,270	19.4	1,689,098
1979	19,554	26.8	20,033	27.4	7,061	9.7	26,332	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,659	12.3	4,276	3.4	53,325	41.9	127,148
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,628	37.9	18,310	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,411	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,298
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	614,453	47.3	530,445	40.8	15,460	1.2	139,002	10.7	1,299,360
1987	38,660	35.2	47,707	43.4	5,229	4.8	18,205	16.6	109,801
1988	226,776	48.3	179,092	38.1	9,890	2.1	54,210	11.5	469,972
1989	1	0.0	37,971	56.3	5,580	8.3	23,878	35.4	67,430
1990	323,955	53.7	225,429	37.3	10,302	1.7	43,944	7.3	603,630
Average[1]	290,460	37.7	248,017	35.9	20,667	4.7	129,178	21.8	688,322

[1] 1989 excluded from average.

Appendix A.5. Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966-1990.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	424,972	79.8	7,461	1.4	64,725	12.1	35,598	6.7	532,756
1967	233,041	78.5	399	0.1	25,013	8.4	38,384	12.9	296,837
1968	1,022,900	90.7	1,563	0.1	44,986	4.0	58,454	5.2	1,127,903
1969	238,497	89.2	399	0.1	16,949	6.3	11,386	4.3	267,231
1970	705,467	90.4	1,228	0.2	48,783	6.3	24,507	3.1	779,985
1971	274,567	84.8	128	0.0	32,647	10.1	16,603	5.1	323,945
1972	564,253	90.1	1,727	0.3	40,567	6.5	19,780	3.2	626,327
1973	605,730	90.7	1,965	0.3	29,019	4.3	30,847	4.6	667,561
1974	344,594	86.8	506	0.1	15,346	3.9	36,492	9.2	396,938
1975	886,474	93.2	979	0.1	32,741	3.4	30,787	3.2	950,981
1976	405,773	86.5	1,484	0.3	47,877	10.2	14,050	3.0	469,184
1977	1,153,454	93.5	1,413	0.1	54,708	4.4	23,861	1.9	1,233,436
1978	489,065	85.5	4,617	0.8	40,946	7.2	37,331	6.5	571,959
1979	609,239	93.8	907	0.1	30,342	4.7	9,270	1.4	649,758
1980	339,970	87.4	2,147	0.6	30,105	7.7	16,728	4.3	388,950
1981	756,848	91.0	2,415	0.3	26,513	3.2	46,208	5.6	831,984
1982	1,348,510	94.1	4,777	0.3	36,647	2.6	43,006	3.0	1,432,940
1983	1,044,644	93.7	2,764	0.2	38,129	3.4	29,321	2.6	1,114,858
1984	567,480	83.4	3,675	0.5	34,207	5.0	74,727	11.0	680,089
1985	700,848	90.7	4,133	0.5	31,746	4.1	36,122	4.7	772,849
1986	1,012,028	89.2	7,027	0.6	39,078	3.4	76,040	6.7	1,134,173
1987	211,573	60.6	16,608	4.8	53,558	15.3	67,180	19.3	348,919
1988	580,650	81.9	11,841	1.7	40,354	5.7	75,728	10.7	708,573
1989	72	0.1	12,302	10.1	27,705	22.7	81,948	67.2	122,027
1990	289,521	82.4	4,611	1.3	21,355	6.1	35,710	10.2	351,197
Average[1]	617,087	87.0	3,532	0.6	36,514	6.2	37,005	6.2	694,139

[1] 1989 excluded from average.

Appendix A.6. Upper Cook Inlet commercial salmon harvest by gear type and area, 1966-1990.

Year	Central District Drift Gill Net		Central District Set Gill Net: East Side		Central District Set Gill Net: Kalgin/West Side		Northern District Set Gill Net		Total
	Number	%	Number	%	Number	%	Number	%	
1966	2,203,180	47.0	1,538,621	32.8	327,585	7.0	619,610	13.2	4,688,996
1967	1,184,228	62.6	364,541	19.3	135,249	7.1	208,947	11.0	1,892,965
1968	2,612,714	52.6	1,189,117	24.0	269,670	5.4	890,987	18.0	4,962,488
1969	652,011	59.0	247,514	22.4	125,541	11.4	80,910	7.3	1,105,976
1970	1,641,429	62.1	460,676	17.4	189,798	7.2	349,340	13.2	2,641,243
1971	739,835	66.3	153,374	13.7	125,986	11.3	97,251	8.7	1,116,446
1972	1,207,217	54.1	643,323	28.8	160,443	7.2	220,605	9.9	2,231,588
1973	1,105,354	62.3	299,616	16.9	130,542	7.4	237,824	13.4	1,773,336
1974	827,141	52.2	471,210	29.7	118,352	7.5	168,141	10.6	1,584,844
1975	1,457,277	66.5	340,625	15.5	173,510	7.9	220,446	10.1	2,191,858
1976	2,142,563	59.4	1,012,991	28.1	183,952	5.1	270,096	7.5	3,609,602
1977	2,626,455	64.9	912,023	22.5	223,362	5.5	285,347	7.1	4,047,187
1978	3,304,925	64.6	1,085,009	21.2	265,302	5.2	464,150	9.1	5,119,386
1979	1,199,085	62.3	308,166	16.0	216,395	11.2	202,400	10.5	1,926,046
1980	2,165,142	53.7	911,327	22.6	269,750	6.7	687,951	17.1	4,034,170
1981	1,672,457	57.8	558,657	19.3	180,338	6.2	484,282	16.7	2,895,734
1982	4,139,886	65.7	1,530,966	24.3	303,249	4.8	322,441	5.1	6,296,542
1983	4,621,365	68.2	1,582,746	23.4	277,819	4.1	289,944	4.3	6,771,874
1984	2,290,273	59.3	758,174	19.6	298,978	7.7	515,766	13.4	3,863,191
1985	3,127,467	55.7	1,671,259	29.8	472,238	8.4	341,272	6.1	5,612,236
1986	4,969,254	62.0	2,291,571	28.6	296,292	3.7	460,468	5.7	8,017,585
1987	6,088,837	58.3	3,656,473	35.0	342,782	3.3	361,608	3.5	10,449,700
1988	5,217,224	60.7	2,687,819	31.2	274,593	3.2	422,229	4.9	8,601,865
1989	819	0.0	4,686,002	84.2	304,209	5.5	575,068	10.3	5,566,098
1990	3,166,684	62.6	1,391,505	27.5	174,066	3.4	325,035	6.4	5,057,290
Average[1]	2,515,083	60.1	1,086,138	25.9	230,658	5.5	355,294	8.5	4,187,173

[1] 1989 figures not included in average.

Appendix A.7. Upper Cook Inlet commercial salmon harvest by species, 1954-1990.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,207	510,068	4,291,726
1955	45,926	1,027,528	170,777	101,680	248,343	1,594,254
1956	64,977	1,258,789	198,189	1,595,375	782,051	3,899,381
1957	42,158	643,712	125,434	21,228	1,001,470	1,834,002
1958	22,727	477,392	239,765	1,648,548	471,697	2,860,129
1959	32,651	612,676	106,312	12,527	300,319	1,064,485
1960	27,512	923,314	311,461	1,411,605	659,997	3,333,889
1961	19,737	1,162,303	117,778	34,017	349,628	1,683,463
1962	20,210	1,147,573	350,324	2,711,689	970,582	5,200,378
1963	17,536	942,980	197,140	30,436	387,027	1,575,119
1964	4,531	970,055	452,654	3,231,961	1,079,084	5,738,285
1965	9,741	1,412,350	153,619	23,963	316,444	1,916,117
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,904	469,850	2,278,197	1,119,114	4,976,601
1969	12,407	692,244	100,962	34,030	269,842	1,109,485
1970	8,358	746,634	279,989	826,639	800,829	2,662,449
1971	19,765	636,798	100,636	35,624	327,029	1,119,852
1972	16,086	879,724	80,933	628,576	630,016	2,235,335
1973	5,194	670,025	104,373	326,183	667,561	1,773,336
1974	6,586	497,160	200,125	484,035	396,938	1,584,844
1975	4,773	678,736	221,739	335,629	950,981	2,191,858
1976	10,867	1,664,131	208,710	1,256,743	469,806	3,610,257
1977	14,792	2,052,511	192,599	553,855	1,233,722	4,047,479
1978	17,302	2,621,667	219,360	1,689,098	571,959	5,119,386
1979	13,738	924,415	265,166	72,982	650,357	1,926,658
1980	13,795	1,573,637	271,378	1,786,430	390,810	4,036,050
1981	12,240	1,439,235	485,148	127,169	833,549	2,897,341
1982	20,870	3,259,864	793,937	790,648	1,433,866	6,299,185
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,041	2,105,860	449,903	617,298	680,089	3,860,839
1985	24,086	4,060,260	667,213	87,828	772,829	5,612,216
1986	39,240	4,787,982	756,830	1,299,360	1,134,173	8,017,585
1987	39,661	9,500,186	451,404	109,801	349,132	10,450,184
1988	29,060	6,834,342	560,022	469,972	708,573	8,601,969
1989	26,742	5,010,698	339,201	67,430	122,027	5,566,098
1990	16,105	3,604,064	500,026	603,630	351,197	5,075,022
Average	20,940	2,038,181	309,415	800,046	645,556	3,814,077

Appendix A.8. Approximate exvessel value of the Upper Cook Inlet commercial salmon harvest by species, 1960-1990.

Year	Chinook	%	Sockeye	%	Coho	%	Pink	%	Chum	%	Total
1960	$140,000	5.0	$1,334,000	47.9	$307,000	11.0	$663,000	23.8	$343,000	12.3	$2,787,000
1961	$100,000	4.7	$1,687,000	79.4	$118,000	5.6	$16,000	0.8	$204,000	9.6	$2,125,000
1962	$100,000	2.5	$1,683,000	42.3	$342,000	8.6	$1,274,000	32.0	$582,000	14.6	$3,981,000
1963	$89,000	4.6	$1,388,000	72.3	$193,000	10.1	$13,000	0.7	$236,000	12.3	$1,919,000
1964	$20,000	0.5	$1,430,000	38.9	$451,000	12.3	$1,131,000	30.8	$646,000	17.6	$3,678,000
1965	$50,000	2.0	$2,099,000	82.1	$109,000	4.3	$70,000	2.7	$230,000	9.0	$2,558,000
1966	$50,000	1.2	$2,727,000	64.4	$295,000	7.0	$823,000	19.4	$338,000	8.0	$4,233,000
1967	$49,000	1.9	$2,135,000	82.6	$187,000	7.2	$13,000	0.5	$202,000	7.8	$2,586,000
1968	$30,000	0.7	$1,758,000	40.4	$515,000	11.8	$1,209,000	27.8	$843,000	19.4	$4,355,000
1969	$70,000	4.3	$1,231,000	75.2	$109,000	6.7	$23,000	1.4	$204,000	12.5	$1,637,000
1970	$49,000	1.8	$1,135,000	42.5	$354,000	13.3	$387,000	14.5	$745,000	27.9	$2,670,000
1971	$189,000	10.7	$1,102,000	62.2	$143,000	8.1	$22,000	1.2	$316,000	17.8	$1,772,000
1972	$217,000	6.3	$1,795,000	52.0	$135,000	3.9	$473,000	13.7	$834,000	24.1	$3,454,000
1973	$122,000	2.0	$3,214,000	52.2	$320,000	5.2	$363,000	5.9	$2,134,000	34.7	$6,153,000
1974	$210,000	3.2	$3,058,000	46.5	$843,000	12.8	$946,000	14.4	$1,521,000	23.1	$6,578,000
1975	$65,000	1.0	$2,596,000	39.0	$821,000	12.3	$423,000	6.4	$2,753,000	41.3	$6,658,000
1976	$276,000	2.0	$8,626,000	63.2	$818,000	6.0	$1,879,000	13.8	$2,040,000	15.0	$13,639,000
1977	$525,000	2.4	$13,274,000	61.8	$933,000	4.3	$772,000	3.6	$5,991,000	27.9	$21,495,000
1978	$667,000	2.0	$26,128,000	80.3	$1,388,000	4.3	$2,154,000	6.6	$2,217,000	6.8	$32,554,000
1979	$625,000	4.3	$8,094,000	55.2	$1,658,000	11.3	$89,000	0.6	$4,201,000	28.6	$14,667,000
1980	$417,000	3.2	$7,932,000	61.6	$902,000	7.0	$2,114,000	16.4	$1,516,000	11.8	$12,881,000
1981	$422,000	2.6	$11,071,000	67.9	$2,638,000	16.2	$179,000	1.1	$2,005,000	12.3	$16,315,000
1982	$753,000	2.1	$25,029,000	69.0	$4,139,000	11.4	$515,000	1.4	$5,851,000	16.1	$36,287,000
1983	$585,000	2.0	$23,841,000	81.5	$1,603,000	5.5	$38,000	0.1	$3,195,000	10.9	$29,262,000
1984	$311,990	1.8	$12,445,633	71.8	$2,041,480	11.8	$522,419	3.0	$2,007,827	11.6	$17,329,349
1985	$799,173	2.3	$27,479,840	80.0	$3,358,083	9.8	$57,440	0.2	$2,646,553	7.7	$34,341,089
1986	$881,356	1.9	$37,665,832	83.3	$2,838,881	6.3	$698,527	1.5	$3,123,485	6.9	$45,208,081
1987	$1,609,681	1.6	$96,331,886	94.9	$2,368,968	2.3	$84,547	0.1	$1,115,477	1.1	$101,510,559
1988	$1,204,321	1.0	$111,102,230	91.2	$4,731,340	3.9	$650,309	0.5	$4,113,356	3.4	$121,801,556
1989	$803,494	1.4	$56,194,753	95.0	$1,674,393	2.8	$86,012	0.1	$415,535	0.7	$59,174,187
1990	$436,822	1.1	$35,804,485	88.0	$2,419,202	5.3	$512,590	1.3	$1,495,827	3.7	$40,668,906

Appendix A.9. Commercial herring harvest by fishery, Upper Cook Inlet, 1973-1990.

	Harvest (Tons)			
Year	Eastside	Chinitna Bay	Tuxedni Bay	Total
1973	13.8	0	0	13.8
1974	36.7	0	0	36.7
1975	6.2	0	0	6.2
1976	5.8	0	0	5.8
1977	17.3	0	0	17.3
1978	8.3	55.3	0	63.6
1979	67.3	96.2	24.8	188.3
1980	37.4	20.0	86.5	143.9
1981	86.2	50.5	84.9	221.6
1982	60.2	91.8	50.2	202.2
1983	165.3	49.2	238.2	452.7
1984	117.5	90.6	159.0	367.1
1985	121.7	47.4	220.5	389.6
1986	178.9	111.1	191.9	481.9
1987	130.5	65.1	152.5	348.1
1988	50.7	23.4	14.1	88.2
1989	55.2	122.3	34.3	211.7
1990	55.4	55.9	16.1	127.4

Appendix A.10. Commercial harvest of razor clams in Cook Inlet, 1919-1990.

Year	Pounds	Year	Pounds
1919	76,963	1955	0
1920	11,952	1956	0
1921	72,000	1957	0
1922	510,432	1958	0
1923	470,280	1959	0
1924	156,768	1960	372,872
1925	0	1961	277,830
1926	0	1962	195,650
1927	25,248	1963	0
1928	0	1964	0
1929	0	1965	0
1930	0	1966	0
1931	No Record	1967	0
1932	93,840	1968	0
1933	No Record	1969	0
1934	No Record	1970	0
1935	No Record	1971	14,755
1936	No Record	1972	31,360
1937	8,328	1973	34,415
1938	No Record	1974	0
1939	No Record	1975	10,020
1940	No Record	1976	0
1941	0	1977	1,762
1942	0	1978	45,931
1943	0	1979	144,358
1944	0	1980	140,420
1945	15,000	1981	441,949
1946	11,424	1982	460,639
1947	11,976	1983	269,618
1948	2,160	1984	261,742
1949	9,672	1985	319,034
1950	304,073	1986	258,632
1951	112,320	1987	312,349
1952	0	1988	392,610
1953	0	1989	222,747
1954	0	1990	323,602

Appendix A.11. Escapement goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1968-1990.

Year	Kenai River		Kasilof River		Fish Creek	
	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[2]
1968	0	88,000	0	93,000	0	19,616
1969	150,000	53,000	75,000	46,000	0	12,456
1970	150,000	73,000	75,000	37,000	0	25,000
1971	150,000	--	75,000	--	0	31,900
1972	150,000-250,000	318,000	75,000-150,000	112,000	0	6,981
1973	150,000-250,000	367,000	75,000-150,000	40,000	0	2,705
1974	150,000-250,000	161,000	75,000-150,000	64,000	0	16,225
1975	150,000-250,000	142,000	75,000-150,000	48,000	0	29,882
1976	150,000-250,000	380,000	75,000-150,000	140,000	0	14,032
1977	150,000-250,000	708,000	75,000-150,000	155,000	0	5,183
1978	350,000-500,000	399,000	75,000-150,000	117,000	0	3,555
1979	350,000-500,000	285,000	75,000-150,000	152,000	0	68,739
1980	350,000-500,000	464,000	75,000-150,000	187,000	0	62,828
1981	350,000-500,000	408,000	75,000-150,000	257,000	0	50,479
1982	350,000-500,000	620,000	75,000-150,000	180,000	50,000	28,164
1983	350,000-500,000	630,000	75,000-150,000	210,000	50,000	118,797
1984	350,000-500,000	345,000	75,000-150,000	232,000	50,000	192,352
1985	350,000-500,000	501,000	75,000-150,000	503,000	50,000	68,577
1986	350,000-500,000	501,000	150,000-250,000	276,000	50,000	29,800
1987	400,000-700,000	1,597,000	150,000-250,000	249,000	50,000	91,215
1988	400,000-700,000	1,021,500	150,000-250,000	202,000	50,000	71,603
1989	400,000-700,000	1,599,959	150,000-250,000	158,206	50,000	67,224
1990	400,000-700,000	659,520	150,000-250,000	144,136	50,000	48,717

Year	Susitna River		Crescent River		Packers Creek	
	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[2]
1978	200,000	94,000	0	N/C	0	N/C
1979	200,000	157,000	50,000	87,000	0	N/C
1980	200,000	191,000	50,000	91,000	0	16,477
1981	200,000	340,000	50,000	41,000	0	13,024
1982	200,000	216,000[3]	50,000	59,000	0	15,687
1983	200,000	112,000[4]	50,000	92,000	0	18,403
1984	200,000	194,000[5]	50,000	118,000	0	30,684
1985	200,000	228,000[5]	50,000	129,000	0	36,850
1986	200,000	92,000[6]	50,000-100,000	N/A	0	29,604
1987	200,000	66,000[6]	50,000-100,000	119,000	0	35,401
1988	100,000-150,000[6]	52,347[6]	50,000-100,000	57,716	15,000-25,000	18,607
1989	100,000-150,000[6]	96,269[6]	50,000-100,000	71,064	15,000-25,000	22,304
1990	100,000-150,000[6]	140,290[6]	50,000-100,000	52,238	15,000-25,000	31,778

[1] Derived from sonar counters unless otherwise noted.
[2] Weir counts.
[3] Poor field conditions make this a minimum estimate; mark/recapture estimate from Su-Hydro studies was 265,000.
[4] Minimum estimate. Combining Yentna sonar with Sunshine Station mark/recapture estimate yields 176,000.
[5] Yentna River sonar count combined with Sunshine Station mark/recapture estimate.
[6] Yentna River only.

Appendix A.12. Average price paid for commercially harvested salmon, Upper Cook Inlet, 1969-1990.[1]

Year	Chinook	Sockeye	Coho	Pink	Chum
1969	0.38	0.28	0.19	0.14	0.12
1970	0.40	0.28	0.25	0.14	0.14
1971	0.37	0.30	0.21	0.15	0.15
1972	0.47	0.34	0.27	0.19	0.20
1973	0.62	0.65	0.50	0.30	0.42
1974	0.88	0.91	0.66	0.46	0.53
1975	0.54	0.63	0.54	0.35	0.41
1976	0.92	0.76	0.61	0.37	0.54
1977	1.26	0.86	0.72	0.38	0.61
1978	1.16	1.32	0.99	0.34	0.51
1979	1.63	1.41	0.98	0.34	0.88
1980	1.15	0.85	0.57	0.34	0.53
1981	1.46	1.20	0.83	0.38	0.65
1982	1.27	1.10	0.72	0.18	0.49
1983	0.97	0.74	0.45	0.18	0.36
1984	1.08	1.00	0.64	0.21	0.39
1985	1.20	1.20	0.70	0.20	0.45
1986	0.90	1.40	0.60	0.15	0.38
1987	1.40	1.50	0.80	0.22	0.45
1988	1.30	2.47	1.20	0.37	0.76
1989	1.25	1.70	0.75	0.40	0.47
1990	1.20	1.55	0.75	0.25	0.60

[1] Expressed as dollars paid per pound.
Data Source: 1969-1983 - Commercial Fisheries Entry Commission.
1984-1990 - Fish ticket averages.

Appendix A.13. Average weight[1] of commercially harvested salmon, Upper Cook Inlet, 1972-1990.

Year	Chinook	Sockeye	Coho	Pink	Chum
1972	28.76	6.00	6.18	3.96	6.62
1973	37.85	7.38	6.13	3.71	7.61
1974	36.20	6.76	6.39	4.25	7.21
1975	25.14	6.07	6.86	3.60	7.06
1976	27.63	6.82	6.43	4.04	8.04
1977	28.19	7.52	6.73	3.67	7.96
1978	33.24	7.55	6.39	3.75	7.60
1979	27.93	6.21	6.38	3.58	7.34
1980	26.29	5.93	5.83	3.48	7.32
1981	23.64	6.41	6.55	3.70	7.66
1982	28.42	6.98	7.24	3.62	8.33
1983	29.64	6.38	6.90	3.04	7.96
1984	28.77	5.91	7.09	4.03	7.57
1985	27.65	5.64	7.19	3.27	7.61
1986	25.91	5.77	6.41	3.72	7.42
1987	28.99	6.73	6.57	3.50	7.10
1988	29.67	6.61	7.05	3.74	7.67
1989	24.04	6.60	6.58	3.19	7.25
1990	22.60	6.41	6.45	3.40	7.10
Average	28.45	6.50	6.60	3.65	7.49

[1] Total poundage divided by numbers of fish from fish ticket totals.

Appendix A.14. Registered units of gillnet fishing effort by gear type in Cook Inlet, 1960-1990.[1]

	Drift			Set			
Year	Resident	Non-Resident	Sub-total	Resident	Non-Resident	Sub-total	Total
1960	221	67	288	511	59	570	858
1961	279	93	372	564	22	586	958
1962	260	112	372	589	28	617	989
1963	333	139	472	626	34	660	1,132
1964	323	145	468	596	35	631	1,099
1965	329	145	474	556	34	590	1,064
1966	328	176	504	580	48	628	1,132
1967	350	186	536	554	50	604	1,140
1968	407	204	611	638	43	681	1,292
1969	497	208	687	686	42	728	1,415
1970	537	220	757	707	65	772	1,529
1971	519	191	710	693	38	731	1,441
1972	419	152	571	672	35	701	1,272
1973	516	146	662	632	43	775	1,437
1974	458	150	608	764	39	803	1,411
1975	291	162	453	613	44	657	1,110
1976	343	171	514	669	42	711	1,225
1977	360	179	539	690	41	731	1,270
1978	366	183	549	698	44	742	1,291
1979	372	182	554	700	44	744	1,298
1980	373	179	554	697	47	744	1,298
1981	414	185	599	688	59	747	1,346
1982	416	175	591	697	51	748	1,339
1983	417	170	587	685	60	745	1,332
1984	426	162	588	672	72	744	1,332
1985	420	170	590	666	65	731	1,321
1986	436	178	614	682	76	758	1,372
1987	422	164	586	666	77	743	1,329
1988	421	163	584	659	82	741	1,325
1989	420	165	585	648	95	743	1,328
1990	408	174	585	648	97	745	1,330

[1]Source: 1960-74 ADF&G unpublished reports, 1975-90 Commercial Fisheries Entry Commission

Appendix A.15. Forecast[1] and projected[2] commercial harvests of salmon by species, Upper Cook Inlet, 1984-1991.

	Sockeye			Coho			Pink			Chum			Chinook		
Year	Forecast	Actual	Error	Projected	Actual	Error	Projected	Actual	Error	Projected	Actual	Error	Projected	Actual	Error
1984	2,200,000	2,102,767	- 4%	250,000	442,619	+77%	1,700,000	622,510	-63%	350,000	684,124	+95%	14,000	8,819	-37%
1985	3,700,000	4,060,260	+10%	250,000	667,213	+167%	112,500	87,828	-22%	700,000	772,829	+10%	17,500	24,086	+38%
1986	4,200,000	4,787,982	+14%	450,000	756,830	+68%	1,250,000	1,299,360	+ 4%	900,000	1,134,173	+26%	32,500	39,240	+21%
1987	4,800,000	9,500,186	+98%	500,000	451,404	-10%	150,000	109,801	-27%	1,000,000	349,132	-65%	30,000	39,661	+32%
1988	5,300,000	6,834,342	+29%	400,000	560,022	+40%	400,000	469,972	+17%	800,000	708,573	-11%	35,000	29,060	-17%
1989	2,500,000	5,010,698	+100%	400,000	339,201	-15%	100,000	67,430	-33%	800,000	122,027	-85%	30,000	26,742	-11%
1990	4,300,000	3,604,064	-16%	250,000	500,026	+100%	600,000	603,630	+1%	400,000	351,197	-12%	25,000	16,105	-36%
1991	3,200,000			400,000			90,000			500,000			20,000		
Average Error (non-parametric)			39%			68%			24%			43%			27%

[1] Harvest forecasts are typically prepared using average return per spawner values, parent-year escapements and average marine maturity schedules.
[2] Harvest projections are prepared using subjective estimates of parent-year escapements, gross trends in harvest and expected intensity of fishery.

Appendix A.16. Subsistence and personal use salmon harvest, Upper Cook Inlet, 1980-1990.

Fishery	No. of Permits	Chinook	Sockeye	Coho	Pink	Chum
Tyonek Subsistence						
1980	67	1,927	261	0	0	0
1981	70	2,002	269	62	32	13
1982	69	1,574	274	113	15	4
1983	73	2,755	251	78	0	6
1984	70	2,364	310	66	3	23
1985	176	1,967	163	91	0	10
1986	101	1,674	198	210	45	44
1987	64	1,552	161	149	10	24
1988	47	1,474	53	185	6	9
1989	49	1,202	67	70	0	1
1990	42	797	92	366	124	10
Non-Commercial Gillnet						
1981	1,108	68	466	12,713	149	305
Kasilof Personal Use						
1982	649	372	7,543	24	17	0
1983	684	307	8,846	0	0	0
1984	698	165	12,926	0	0	0
1985	692	203	10,746	0	0	0
1986	N/A	168	9,609	0	0	0
1987	N/A	184	9,375	0	0	0
1988	N/A	118	9,803	0	0	0
1989	N/A	186	9,928	0	0	0
1990	N/A	133	7,123	0	0	0
Fall Coho Personal Use/Subsistence						
1983	295	0	0	712	0	0
1984	309	1	2	2,261	10	7
1985	998	50	805	11,265	108	53
1986	892	0	0	2,422	0	0
1987	486	8	9	2,213	2	37
1988	449	2	19	2,662	38	10
1989	365	0	0	2,376	0	0
1990	420	0	0	2,290	0	0
Northern/Central Districts Subsistence						
1985	638	117	2,218	1,427	90	121
Knik Arm Subsistence						
1985	405	4	1,649	2,055	48	212
Kenaitze Tribal Fishery						
1989	N/A	95	2,212	1,814	0	0
1990	N/A	53	3,477	1,117	326	0